Kansas Classroom Handbook of Communicable Diseases

Bureau of Epidemiology and Public Health Informatics

The Classroom Handbook of Communicable Diseases is a resource for school nurses and is intended as a brief overview of infectious diseases which are of public health importance.

Kansas Department of Health and Environment

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Revision History:

Date	Section(s) Changed	Comments
9/2015	--	Kansas Classroom Handbook of Communicable Diseases first uploaded to KDHE website
3/2016	Human Rabies	Section updated with hyperlink to "Compendium of Animal Rabies Prevention and Control, 2016"
10/2018	--	Document updated to reflect new disease reporting and control regulations effective 5/11/2018
10/2019	Influenza	Section changed to reflect the update in recommendation regarding the management of persons with influenza released in the Memorandum dated 10/23/2019
2/2025	Influenza	Section changed to reflect the update in recommendation regarding the management of persons with influenza released in the Memorandum dated 5/22/2024

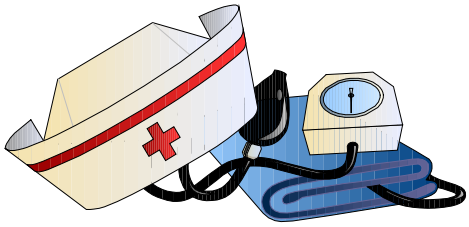
Introduction

The classroom handbook of communicable diseases for school nurses is intended as a brief overview of immunization requirements and infectious diseases which are of public health importance. This handbook includes information on vaccine preventable diseases, gastrointestinal diseases, sexual transmitted diseases, as well as other diseases and health conditions.

There are two main sections in this handbook. The first section includes statutes and regulations related to immunization requirements and communicable diseases and conditions. The second section is disease-specific, with diseases listed alphabetically and containing key information on symptoms, modes of transmission, measures of control, and other pertinent information.

This handbook is authored and provided by the Infectious Disease Epidemiology and Response Section within the Bureau of Epidemiology and Public Health Informatics at the Kansas Department of Health and Environment (KDHE) and is available on the KDHE website at:
http://www.kdheks.gov/epi/download/Kansas_Classroom_Handbook_of_Communicable_Diseases.pdf

We hope that all school staff members find this reference handbook to be a valuable resource. For further information on communicable diseases and control of these diseases, school nurses can call their local health department or the KDHE Epidemiology Hotline (877-427-7317).



Immunization Statutes and Regulations

Definitions for Immunization Statutes

K.S.A. 72-6261: Health tests and inoculations; definitions.

As used in this act:

a) "School board" means the board of education of a school district and the governing authority of any nonpublic school;

b) "school" means all elementary, junior high, or high schools within the state;

c) "local health department" means any county or joint board of health established under the laws of Kansas and having jurisdiction over the place where any pupil affected by this act may reside;

d) "secretary" means the secretary of the state department of health and environment;

e) "physician" means a person licensed to practice medicine and surgery.

Certification of Immunizations

K.S.A. 72-6262: Health tests and inoculations; certification of completion required, alternatives; duties of school boards.

a) In each school year, every pupil enrolling or enrolled in any school for the first time in this state, and each child enrolling or enrolled for the first time in a preschool or daycare program operated by a school, and such other pupils as may be designated by the secretary, prior to admission to and attendance at school, shall present to the appropriate school board certification from a physician or local health department that the pupil has received such tests and inoculations as are deemed necessary by the secretary by such means as are approved by the secretary. Pupils who have not completed the required inoculations may enroll or remain enrolled while completing the required inoculations if a physician or local health department certifies that the pupil has received the most recent appropriate inoculations in all required series. Failure to timely complete all required series shall be deemed non-compliance.
b) As an alternative to the certification required under subsection (a), a pupil shall present:
    (1) an annual written statement signed by a licensed physician stating the physical condition of the child to be such that the tests or inoculations would seriously endanger the life or health of the child, or
    (2) a written statement signed by one parent or guardian that the child is an adherent of a religious denomination whose religious teachings are opposed to such tests or inoculations.
c) On or before May 15 of each school year, the school board of every school affected by this act shall notify the parents or guardians of all known pupils who are enrolled or who will be enrolling in the school of the provisions this act and any policy regarding the implementation of the provisions of this act adopted by the school board.
d) If a pupil transfers from one school to another, the school from which the pupil transfers shall forward with the pupil's transcript the certification or statement showing evidence of compliance with the requirements of this act to the school to which the pupil transfers.

Forms for Immunization Records

K.S.A. 72-6264: Same; duties of secretary; forms and certificates; regulations. The secretary shall prescribe the content of forms and certificates to be used by school boards in carrying out this act and shall provide, without cost to the school boards, sufficient copies of this act for distribution to pupils. Schools shall utilize the reporting form adopted by the secretary for documentation of all immunizations. Audit information shall be obtained from this adopted form. The secretary may adopt such regulations as are necessary to carry out the provisions of this act.

Expulsion of Under-Immunized Pupils

K.S.A. 72-6265: Exclusion of pupils from school attendance; adoption of policy; notice; hearing; compulsory attendance law not applicable.

a) The school board of every school affected by this act may exclude from school attendance, or by policy adopted by any such school board authorize any certificated employee or committee of certificated employees to exclude from school attendance, any pupil who has not complied with the requirements of K.S.A. 72-6262. A pupil shall be subject to exclusion from school attendance under this section until such time as the pupil shall have complied with the requirements of

K.S.A. 72-6262. The policy shall include provisions for written notice to be given to the parent or guardian of the involved pupil. The notice shall:

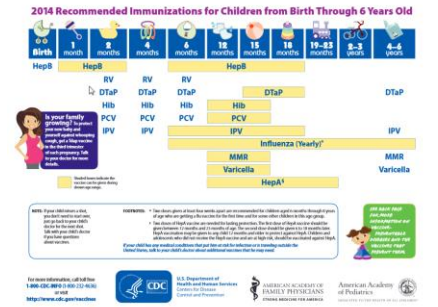
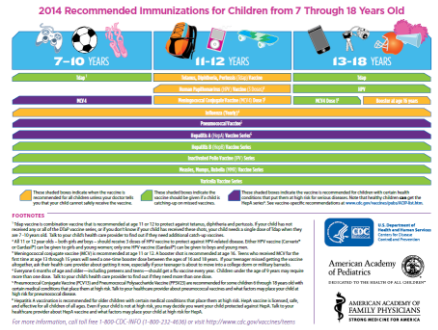
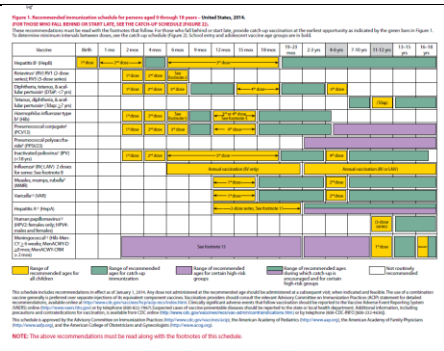
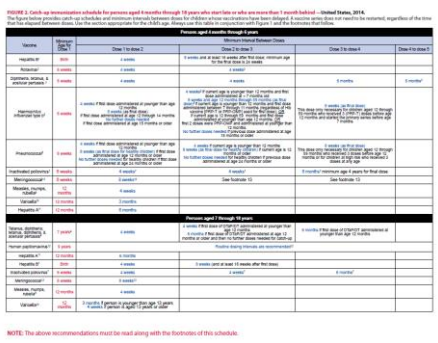
(1) indicate the reason for the exclusion from school attendance

(2) state that the pupil shall continue to be excluded until the pupil has complied with the requirements of K.S.A. 72-6262, and

(3) inform the parent or guardian that a hearing thereon shall be afforded the parent or guardian upon request therefor.

b) The provisions of K.S.A. 72-3120 do not apply to any pupil while subject to exclusion from school attendance under the provisions of this section.

Immunization Schedules and School Requirements

	**Recommended Immunizations for Children (Birth through 6 years)** English Spanish
	**Recommended Immunizations for Preteens and Teens (7-18 years)** English Spanish
	**Birth-18 Years Recommended Immunization Schedule for Persons Age 0 Through 18 Years** English
	**Catch-up Immunization Schedule for Persons Aged 4 Months Through 18 Years Who Start Late or Who Are More Than 1 Month Behind** English

Link to the Kansas Certificate of Immunization
http://www.kdheks.gov/immunize/download/KCI_Form.pdf

Link to the Kansas Medical Exemption Form
http://www.kdheks.gov/immunize/imm_manual_pdf/KCI_formB.pdf

Link to the Current School and Childcare Immunization Requirements
http://www.kdheks.gov/immunize/schoolInfo.htm

Infectious Diseases and Conditions

Scope and Authority of State Public Health

K.S.A. 65-101: Health supervision; investigation of causes of disease, sickness and death; sanitation inspections; prevention of spread of disease; outreach services; rules and regulations; injunction.

a) The secretary of health and environment shall exercise general supervision of the health of the people of the state and may:
    (1) where authorized by any other statute, require reports from appropriate persons relating to the health of the people of the state so a determination of the causes of sickness and death among the people of the state may be made through the use of these reports and other records;
    (2) investigate the causes of disease, including especially, epidemics and endemics, the causes of mortality and effects of locality, employments, conditions, food, water supply, habits and other circumstances affecting the health of the people of this state and the causes of sickness and death;
    (3) advise other offices and agencies of government concerning location, drainage, water supply, disposal of excreta and heating and ventilation of public buildings;
    (4) make sanitary inspection and survey of such places and localities as the secretary deems advisable;
    (5) take action to prevent the introduction of infectious or contagious disease into this state and to prevent the spread of infectious or contagious disease within this state;
    (6) provide public health outreach services to the people of the state including educational and other activities designed to increase the individual's awareness and appropriate use of public and other preventive health services.

b) The secretary of health and environment may adopt rules and regulations necessary to carry out the provisions of paragraphs (1) through (6), inclusive, of subsection (a). In addition to other remedies provided by law, the secretary is authorized to apply to the district court, and such court shall have jurisdiction upon a hearing and for cause shown to grant a temporary or permanent injunction to compel compliance with such rules and regulations.

Reporting Infectious Diseases

K.S.A. 65-118: Reporting to local health authority as to infectious or contagious diseases; persons reporting; immunity from liability; confidentiality of information; disclosure.

a) Whenever any person licensed to practice the healing arts or engaged in a postgraduate training program approved by the state board of healing arts, licensed dentist, licensed professional nurse, licensed practical nurse, administrator of a hospital, licensed adult care home administrator, licensed physician assistant, licensed social worker, teacher or school administrator knows or has information indicating that a person is suffering from or has died from a reportable infectious or contagious disease as defined in rules and regulations, such knowledge or information shall be reported immediately to the county or joint board of health or the local health officer, together with the name and address of the person who has or is suspected of having the infectious or contagious disease, or the name and former address of the deceased individual who had or was suspected of having such a disease. In the case of a licensed hospital or adult care home, the administrator may designate an individual to receive and make such reports. The secretary of health and environment shall, through rules and regulations, make provision for the consolidation of reports required to be made under this section when the person required to make the report is working in a licensed hospital or adult care home. Laboratories certified under the federal

clinical laboratories improvement act pursuant to 42 code of federal regulations, 493 shall report the results of microbiologic cultures, examinations, immunologic essays for the presence of antigens and antibodies and any other laboratory tests which are indicative of the presence of a reportable infectious or contagious disease to the department of health and environment. The director of the division of health may use information from death certificates for disease investigation purposes.

b) Any person who is an individual member of a class of persons designated under subsection (a) of this section and who reports the information required to be reported under such subsection in good faith and without malice to a county or joint board of health, a local health officer or the department of health and environment shall have immunity from any liability, civil or criminal, that might otherwise be incurred or imposed in an action resulting from such report. Any such person shall have the same immunity with respect to participation in any judicial proceeding resulting from such report.

c) Information required to be reported under subsection (a) of this section shall be confidential and shall not be disclosed or made public, upon subpoena or otherwise, beyond the requirements of subsection (a) of this section or subsection (a) of K.S.A. 65-119, except such information may be disclosed:

(1) if no person can be identified in the information to be disclosed and the disclosure is for statistical purposes;
(2) if all persons who are identifiable in the information to be disclosed consent in writing to its disclosure;
(3) if the disclosure is necessary, and only to the extent necessary, to protect the public health;
(4) if a medical emergency exists and the disclosure is to medical personnel qualified to treat infectious or contagious diseases. Any information disclosed pursuant to this paragraph shall be disclosed only to the extent necessary to protect the health or life of a named party; or
(5) if the information to be disclosed is required in a court proceeding involving child abuse and the information is disclosed *in camera*.

Reportable Diseases in Kansas

Entries marked with a ☎ require telephone report within <u>four hours</u> to KDHE: 877-427-7317. All other reportable diseases may be reported within 24 hours or by the next business day. Sexually transmitted infections shall be reported to the STI/HIV section at KDHE within 24 hours: 785-296-5596.

- Acute flaccid myelitis
- **Anthrax** ☎
- Anaplasmosis
- Arbovirual diseas, neuroinvasive and nonneuroinvasive (including chikungunya virus, dengue virus, La Cross, West Nile virus, and Zika virus
- Babesiosis
- Blood lead levels (any results)
- **Botulism** ☎
- Brucellosis
- Campylobacteriosis
- *Candida auris*
- Carbapenem-resistant bacterial infection or colonization
- Carbon monoxide poisoning
- Chancroid
- Chickenpox (varicella)
- *Chlamydia trachomatis* infection
- **Cholera** ☎
- Coccidioidomycosis
- Cryptosporidiosis
- Cyclosporiasis
- **Diptheria** ☎
- Ehrlichiosis
- Giardiasis
- Gonorrhea (include antibiotic susceptibility results, if performed)
- *Haemophilus influenzae*, invasive disease
- Hansen's disease (leprosy)
- Hantavirus
- Hemolytic uremic syndrome, post-diarrheal
- Hepatitis, viral (A,B,C,D, and E, acute and chronic)
- Hepatitis B during pregnancy
- Hepatitis B in children <5 years of age (report all positive, negative, and inconclusive lab results)
- Histoplasmosis
- Human Immunodeficiency Virus (HIV) (report the CD4+ T-lymphocyte cell counts, viral load of an y value, and each pregnancy of women diagnosed with HIV)
- Influenza deaths in children <18 years of age
- Leptospirosis
- **Influenza, novel A virus infection** ☎
- Legionellosis
- Listeriosis
- Lyme disease
- Malaria
- **Measles (rubeola)** ☎
- **Meningococcal disease** ☎
- **Mumps** ☎
- Pertussis (whooping cough)
- **Plague (*Yersinia pestis*)** ☎
- **Poliovirus** ☎
- Psittacosis
- Q Fever (*Coxiella burnetii*, acute and chronic)
- **Rabies, human** ☎
- Rabies, animal
- **Rubella** ☎
- Salmonellosis, including typhoid fever
- **Severe Acute Respiratory Syndrome-associated coronavirus (SARS-CoV)** ☎
- Shiga toxin-producing *Escherichia coli* (STEC)
- Shigellosis
- **Smallpox** ☎
- Spotted fever rickettsiosis
- *Streptococcus pneumoniae*, invasive disease
- Syphilis, all stages, including congenital syphilis
- **Tetanus** ☎
- Toxic shock syndrome, streptococcal and other
- Transmissible spongiform encephalopathy (TSE) or prion disease
- Trichinellosis or trichinosis
- **Tuberculosis, active disease** ☎
- Tuberculosis, latent infection
- Tularemia, including laboratory exposures
- **Vaccinia, post vaccination infection or secondary transmission** ☎
- Vancomycin-intermediate and resistant *Staphylococcus aureus* (VISA and VRSA)
- Vibriosis (all *cholerae* and non-*cholerae Vibrio* species)
- **Viral hemorrhagic fevers** ☎
- Yellow fever

☎ Outbreaks of any disease, unusual occurrence of any disease, exotic, or newly recognized diseases, and suspect acts of terrorism should be **<u>reported within 4 hours</u>** by telephone to the Epidemiology Hotline: 877-427-7317.

Isolation and Quarantine

K.A.R. 28-1-5: General provisions for isolation or quarantine of persons afflicted with infectious or contagious disease; examination of persons; collection of specimens.

a) When the conditions of isolation and quarantine are not otherwise specified by regulation, the isolation and quarantine of persons afflicted with or exposed to infectious or contagious diseases shall be ordered and enforced by the local health officer or the secretary of health and environment to preserve the public health, safety, or welfare. The conditions of isolation or quarantine so ordered shall be based on current medical knowledge of the infectious agent of the disease for which isolation or quarantine is ordered and may include consideration of the following factors:
    (1) the incubation period;
    (2) the communicable period;
    (3) the mode of transmission; and
    (4) susceptibility.

b) Isolation or quarantine, or both, shall be ordered in conjunction with investigation of infectious or contagious disease cases and outbreaks for examining persons reasonably suspected of having these diseases and for obtaining specimens from these persons for laboratory evidence suggestive of infectious or contagious disease. (Authorized by K.S.A. 65-101 and 65-128; implementing K.S.A.65-101; effective May 1, 1982; amended July 20, 2007.)

K.A.R. 28-1-6: Requirements for isolation and quarantine of specific infectious and contagious diseases; exception; definition.

a) Any of the requirements specified for isolation and quarantine may be altered by the secretary or the local health officer if the secretary or local health officer determines that an alteration is necessary for the greater protection of public health, safety, or welfare. The requirements for altered isolation or quarantine, or both, shall be based on current medical knowledge of the infectious or contagious disease for which isolation or quarantine, or both, are ordered considering the following factors:
    (1) the incubation period;
    (2) the communicable period;
    (3) the mode of transmission; and
    (4) susceptibility

Symbols for Infectious Disease and Conditions Classroom Handbook

Symbol	Explanation
	This represents a disease that is not reportable in the state of Kansas; however if an outbreak is identified, please report to the Kansas Department of Health and Environment
	This represents a disease which is reportable to the Local Health Department or to the Kansas Department of Health and Environment
	This represents a disease which must be reported by telephone to the Kansas Department of Health and Environment within 4 hours for suspected or confirmed cases.

The following entries on infectious diseases are based on recommendations by the Centers for Disease Control and the Kansas Department of Health and Environment Disease Investigation Guidelines. For further information regarding infectious diseases which are reportable to KDHE, please consult the disease-specific resources on each page or the Disease Investigation Guidelines.

Campylobacteriosis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Acute gastroenteritis of variable severity, characterized by diarrhea that is often bloody, abdominal pain, malaise, nausea and occasional vomiting.
Infectious Agent	Two most common types are *Campylobacter jejuni* and *Campylobacter coli*
Mode of Transmission	Fecal-oral, including person-to-person, animal-to-person, waterborne, and foodborne. Ingestion of the organism in under-cooked meat, food, water, or contaminated raw (unpasteurized) milk, or from contact with infected pets (especially puppies and kittens), farm animals or infected infants.
Incubation Period	Usually 2 to 5 days, with a range from 1 to 10 days, depending on the infective dose
Period of Communicability	Throughout the course of infection; usually from several days to several weeks. Individuals not treated with antibiotics may shed organisms for 2-7 weeks.
Control Measures	Provide education on measures to avoid future illness, such as the importance of hand washing and safe food preparation practices.
Contact Investigation	Only with evidence of transmission in a school setting. Consider those who share foods or activities with other ill persons (e.g. common food/drink, animal, or recreational water sources).
Duration of Illness	Duration of illness is usually 2 to 5 days.
Exclusion and Readmission Criteria	School attendees or employees with campylobacteriosis are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours.
Additional Resources	CDC Website – Campylobacter KDHE Disease Investigation Guideline – Campylobacter FoodSafety.gov – Campylobacter

Chickenpox (Varicella)

⚠	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following suspicion, regardless of laboratory evidence. Please use the varicella report form to report cases.**
Signs and Symptoms	Fever and fatigue followed by generalized, itchy rash. This rash usually appears first on the face, chest and back then spreads to the rest of the body. Varicella in a vaccinated person maybe mild, without fever, and with an atypical rash with papules that do not progress to vesicles.
Infectious Agent	Varicella-Zoster virus
Mode of Spread	Person-to-person by direct contact, droplet or airborne spread of respiratory tract secretions; indirectly through articles freshly contaminated with secretions from infected persons.
Incubation Period	Usually 14 to 16 days, with a range from 10 to 21 days.
Period of Communicability	From 1 to 2 days before the rash appears until lesions are crusted.
Control Measures	Identify all susceptible contacts and recommend the varicella vaccine be given if within 72 hours of exposure. Non-immune contacts that are unable to receive varicella vaccine within 72 hours of first exposure are required to be excluded for 21 days following the last exposure.
Contact Investigation	In the school setting, classmates, teachers, and other staff should be considered as potentially exposed individuals. Also consider students that sit at the same lunch table, ride the same bus or participate on the same recreational team. Susceptible individuals are those who have neither documented history of varicella disease nor any immunizations against chickenpox. U.S.-born individuals who were born before 1980 are considered immune. Provide education to susceptible contacts on the benefits of vaccination, incubation period, symptoms and precautions to take if symptoms develop. In school settings, active surveillance should be conducted for 21 days after the last case was reported.
Duration of Illness	Duration of illness is usually 5 to 10 days
Exclusion and Readmission Criteria	Each person with varicella shall remain in home isolation until vesicles become dry and crusted except when seeking medical care. Each susceptible contact not age appropriately vaccinated within 72 hours of first exposure to an infectious case shall be excluded from working in an adult care home, correctional facility, or healthcare facility and attending or working in a school, child care facility, or adult daycare for 21 days from the last exposure to an infectious case.
Additional Resources	CDC Website – Chickenpox (Varicella) CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Chickenpox (Varicella) KDHE Varicella Case Report Form

Chlamydia

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Most people with chlamydia have no symptoms. Females may have an abnormal vaginal discharge and burning sensation when urinating. Males may have a discharge from their penis, burning sensation when urinating, and pain and swelling in one or both testicles.
Infectious Agent	*Chlamydia trachomatis*
Mode of Spread	Sexual activity; pregnant women may infect their newborn children during childbirth
Incubation Period	Poorly defined due to the general lack of symptoms in most infected individuals. Symptoms may not appear until several weeks after exposure (in those persons who develop symptoms).
Period of Communicability	May extend for months or longer if untreated. Asymptomatic persons may be as infectious as those that are symptomatic.
Control Measures	Public education includes recognition of disease, awareness of modes of transmission, complications of the disease, and the benefits of practicing safe sex.
Contact Investigation	Contacts are defined as individuals who have had sexual contact with an infected person during the 60-day time period prior to the onset of symptoms or positive test. If no sexual contacts are identified in the 60 days prior to the onset of symptoms or positive test, identify the most recent sexual partner.
Duration of Illness	Without treatment, infection can persist for months
Exclusion and Readmission Criteria	There is no exclusion for persons with chlamydial infection. Abstain from sexual contact for seven days following completion of treatment.
Additional Resources	CDC Website – Chlamydia CDC Website – Chlamydia (Spanish) KDHE Disease Investigation Guideline - Chlamydia

Conjunctivitis, Bacterial (Pink-eye)

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Pink or red color in the white of the eye(s), discharge, itchy eyes, and crusting of eyelids or lashes.
Infectious Agent	Commonly, *Haemophilus* species, *Streptococcus pneumonia*, *Staphylococcus aureus,* and *Moraxella catarrhalis*
Mode of Spread	Contact with discharges from eyes or upper respiratory tract of infected persons, through contaminated fingers, clothing, or other items.
Incubation Period	1 to 3 days
Period of Communicability	Throughout active infection
Control Measures	Spread of infection is minimized by careful hand hygiene, and infected people should be presumed contagious until symptoms have resolved.
Contact Investigation	There is no contact investigation requirement for individuals with bacterial conjunctivitis.
Duration of Illness	Typically mild and can last as few as 2 to 3 days or up to 2 to 3 weeks.
Exclusion and Readmission Criteria	Infected children are not required to be excluded from school. Infected children should be allowed to remain in school once any prescribed therapy is implemented, unless their behavior is such that close contact with other students cannot be avoided.
Additional Resources	CDC Website – Conjunctivitis

Cryptosporidiosis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Profuse and watery diarrhea. Additional symptoms include weight loss, abdominal cramps, nausea, vomiting, and low-grade fever.
Infectious Agent	*Cryptosporidium parvum* and *Cryptosporidium hominis* are the two most prevalent species causing disease in humans.
Mode of Spread	Fecal-oral, including: person-to-person, animal-to-person, waterborne and foodborne.
Incubation Period	Range 1 to 12 days; average 7 days
Period of Communicability	Cases are considered communicable as long as oocysts are shed in their stool. Shedding begins when the symptoms begin and can last for weeks after the symptoms (e.g., diarrhea) stop. Oocysts may remain infective outside the body for 2-6 months under ideal environmental conditions.
Control Measures	Because the parasite is in feces, anything that gets contaminated by feces can potentially spread the parasite. As a result, the parasite can be spread directly from person-to-person, through contact with contaminated objects (e.g., toys), or by swallowing contaminated water (drinking and recreational) or food. Crypto outbreaks in child care settings are most common during late summer/early fall (August/September) but might occur at any time. The spread of infection is highest among young children who are not toilet trained and their caregivers (those who change diapers). Cryptosporidium is resistant to chlorine disinfection so it is tougher to kill than most disease-causing germs. An application of 3% hydrogen peroxide seems to work best. Educate staff and parents, exclude any child with diarrhea until no longer symptomatic, terminate all water play or swimming activities, and practice good hygiene.
Contact Investigation	Contacts at risk of serious complications from disease or who pose an increased risk to others because of their activities (i.e., daycare attendees, immunocompromised, and/or frequent swimmers) should be informed of the signs and symptoms of illness, to seek medical attention if symptoms develop and to avoid activities during illness that may spread the disease.
Duration of Illness	Symptoms can come and go for up to 30 days, but usually subside in 1 to 2 weeks. However, severe and prolonged disease in persons with weakened immune systems can occur.
Exclusion and Readmission Criteria	School attendees or employees with cryptosporidiosis are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours. Additionally, cases should not swim or engage in other forms of recreational water use until 2 weeks after symptoms resolve.
Additional Resources	CDC Website – Cryptosporidium KDHE Disease Investigation Guideline - Cryptosporidiosis

Cyclosporiasis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Diarrhea, abdominal cramps, nausea, fatigue, and anorexia. Vomiting and fever are uncommon. Significant weight loss may occur.
Infectious Agent	*Cyclospora cayetanensis*
Mode of Spread	Humans become infected by consuming food or water that has been contaminated with human feces. Noninfectious oocysts are passed in stools, which take days to weeks under favorable environmental conditions to sporulate and become infectious.
Incubation Period	Range 1 to 14 days; average of 7 days
Period of Communicability	Case persons shed unsporulated oocysts while actively ill. It is not known how long oocysts may be shed after symptoms have stopped.
Control Measures	Emphasize personal hygiene, particularly hand washing. Cases should not swim or engage in other forms of recreational water use until after symptoms resolve.
Contact Investigation	Children are a risk only if there is epidemiologic evidence of transmission, such as sharing food/drink or exposure to animal/recreational water sources, or if the infected child is unable to or fails to maintain good hygiene, including hand hygiene after toilet use.
Duration of Illness	Without treatment, the illness may last from a few days to a month or longer.
Exclusion and Readmission Criteria	There is no exclusion for persons with cyclospora infection, but anyone with diarrhea should be excluded from schools until symptoms have resolved for 24 hours.
Additional Resources	CDC Website – Cyclosporiasis KDHE Disease Investigation Guideline - Cyclospora

Diphtheria, Cutaneous & Pharyngeal

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Pharyngeal diphtheria appears as sore throat, low-grade fever, and an adherent grayish membrane of the tonsil(s), pharynx, and/or nose. Large tender cervical lymph nodes and marked swelling and edema of the neck ("bull neck"). Cutaneous diphtheria is usually mild, typically consisting of non-distinctive sores or shallow ulcers that are often slow to heal.
Infectious Agent	*Corynebacterium diphtheriae*
Mode of Spread	Person-to-person transmission by droplets or through direct contact with the respiratory secretions or discharges from skin lesions of an infected person. Fomites and raw milk may also serve as a source of transmission.
Incubation Period	Usually 2 to 5 days, with a range from 1 to 10 days.
Period of Communicability	Variable; usually less than 2 weeks and seldom more than 1 month. Antibiotic therapy can reduce communicability to fewer than 4 days. Carriers may shed organisms for more than 6 months.
Control Measures	All contacts should receive antibiotic treatment. Previously immunized contacts should receive a booster dose of diphtheria toxoid if >5 years have elapsed since their last dose. Non-immunized contacts (those with <3 doses or unknown histories) should begin and/or continue with a primary series according to published recommendations for routine immunizations. **Pharyngeal Only**: All contacts, regardless of their immunization status, shall be monitored for seven days for evidence of disease and shall have specimens collected from both nose and throat for culture. Each contact found to be a carrier shall be considered a person with a case and shall be kept in isolation until requirements in control of cases are met.
Contact Investigation	Contacts are defined as those who sleep in the same house or who share food, drink, or eating/drinking utensils with the case as well as healthcare workers in contact with the case's oral or respiratory secretions.
Exclusion and Readmission Criteria	**Pharyngeal Only**: Each person with pharyngeal diphtheria shall remain in home isolation until: two consecutive negative cultures from both nose and throat specimens are attained at least 24 hours apart and at least 24 hours after completion of antimicrobial therapy OR two sequential pairs of cultures shall be obtained after symptoms resolve and no sooner than 15 days after onset of symptoms if appropriate antimicrobial therapy is not followed. Each contact shall be excluded from working as a food employee, healthcare worker, and attending or working in a school, child care facility, or adult daycare for 28 days from the last exposure to a case, OR until treated with appropriate antimicrobial therapy and two consecutive negative cultures are obtained from both nose and throat specimens collected at least 24 hours apart and at least 24 hours following completion of any antimicrobial

	therapy. **Cutaneous Only**:
Exclusion and Readmission Criteria (cont.)	Each person with cutaneous diphtheria shall remain in home isolation until two consecutive negative cultures from lesion specimens are obtained at least 24 hours apart and at least 24 hours after completion of appropriate antimicrobial therapy, OR two sequential pairs of cultures are obtained after symptoms resolve and no sooner than 15 days after onset of symptoms if appropriate antimicrobial therapy is not followed.
Additional Resources	CDC Website – Diphtheria CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline - Diphtheria

Epstein Barr Virus (Mononucleosis)

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Fever, extreme fatigue, sore throat, headache, body aches, swollen lymph nodes in the neck and armpits, swollen liver or spleen, and rash.
Infectious Agent	Epstein-Barr virus
Mode of Spread	Person-to-person spread by saliva through kissing, sharing drinks or food, using the same cup, eating utensils, or toothbrush, through blood and semen during sexual contact, blood transfusions, and organ transplantations.
Incubation Period	30 to 50 days.
Period of Communicability	Prolonged; pharyngeal excretion may persist for a year or more after infection.
Control Measures	There is no vaccine to protect against EBV infection. Not kissing or sharing drinks, food, or personal items, like toothbrushes, with people who have EBV infection will help avoid transmission.
Contact Investigation	There is no contact investigation requirement for individuals with Epstein Barr Virus.
Duration of Illness	Duration of illness is usually 2 to 4 weeks. Some people may feel fatigued for several more weeks. Occasionally, the symptoms of infectious mononucleosis can last for 6 months or longer.
Exclusion and Readmission Criteria	There is no exclusion for a child with infectious mononucleosis. However, it is recommended the person avoid strenuous activity and contact sports for three to four weeks after the onset of symptoms.
Additional Resources	CDC Website – Epstein-Barr Virus

Fifth Disease (Erythema Infectiosum)

⊘	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	The initial symptoms of fifth disease are usually mild and nonspecific and include fever, runny nose, and headache. After several days a distinctive red rash appears on the face called a "slapped cheek" rash. Some people will get a second rash a few days later on their chest, back, buttocks, arms, and legs that can vary in intensity, is itchy, and can come and go for several weeks.
Infectious Agent	Parvovirus Bl9
Mode of Spread	Primarily through contact with infected respiratory secretions.
Incubation Period	Usually 4 to 14 days, but may range up to 21 days.
Period of Communicability	Greatest before onset of rash; probably not communicable after rash onset.
Control Measures	Washing hands with soap and water, cover mouth and nose when coughing or sneezing, not touching eyes, nose, or mouth, avoiding close contact with those that are sick, and staying home when sick.
Contact Investigation	There is no contact investigation requirement for individuals with fifth disease.
Duration of Illness	Duration of illness is usually 7 to 10 days but can last for several weeks.
Exclusion and Readmission Criteria	There is no exclusion for a child with fifth disease. Children with fifth disease may attend school once the rash appears because they are no longer contagious.
Additional Resources	CDC Website – Fifth Disease

Giardiasis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Symptoms include watery foul-smelling diarrhea, abdominal cramps and excess gas. The diarrhea may be chronic or intermittent and is often accompanied by fatigue and "fatty stools." Anorexia combined with malabsorption can lead to significant weight loss, failure to thrive and anemia. Asymptomatic cases may also occur.
Infectious Agent	*Giardia intestinalis*
Mode of Spread	Fecal-oral, including: person-to-person, animal-to-person, waterborne and foodborne. Contaminated water can be in streams, lake waters and swimming pools. Drinks and ice made from contaminated water may cause illness.
Incubation Period	Usually 7 to 10 days, with a range from 1 to 4 weeks.
Period of Communicability	Persons are infectious as long as cysts are being shed, which may be days to years. Asymptomatic carrier rates are high.
Control Measures	Emphasize personal hygiene, particularly hand washing. Treatment of asymptomatic carriers is not recommended because the resulting benefits and risks have not been established.
Contact Investigation	Contacts are defined as sexual partners, household members, daycare staff and attendees, and those that may have consumed food, water or another beverage, or bathed in a recreational water body that is known to be a source of infection.
Duration of Illness	Duration of illness is 2 to 6 weeks.
Exclusion and Readmission Criteria	School attendees or employees with giardiasis are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours. Additionally, cases should not swim or engage in other forms of recreational water use until 2 weeks after symptoms resolve.
Additional Resources	CDC Website – Giardia CDC Fact Sheet: Giardia and Swimming Pools CDC Fact Sheet: Giardia and Swimming Pools (Spanish) KDHE Disease Investigation Guideline – Giardiasis

Gonorrhea

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	In males, painful inflammation of the urethra and a yellow, white, or green discharge from the penis. Males may also experience painful or difficult urination. In females, symptoms are often mild and many may have no symptoms. Symptoms may include painful urination, increased vaginal discharge, or vaginal bleeding between periods, and painful intercourse.
Infectious Agent	*Neisseria gonorrhoeae*
Mode of Spread	By intimate and direct sexual contact. Pregnant women that are infected may infect their newborn children during childbirth.
Incubation Period	Usually 1 to 14 days, but may range up to 30 days
Period of Communicability	May extend for months in untreated individuals. Adequate treatment usually ends communicability, often within hours.
Control Measures	Treatment and reporting to health authorities of all cases, and examination and treatment of all sexual contacts of cases during the period of communicability, are keys to controlling gonorrhea. Public education includes recognition of disease and awareness of the mode of transmission.
Contact Investigation	Contacts are defined as individuals who have had sexual contact with the case during the 60-day time period prior to the onset of symptoms or positive test. If no sexual contacts are identified in the 60 days prior to the onset of symptoms or positive test, identify the most recent sexual partner.
Duration of Illness	Gonorrhea infections will last until an appropriate treatment regimen has been completed
Exclusion and Readmission Criteria	There is no exclusion for a child with gonorrhea. Abstain from sexual contact for 7 days following completion of treatment.
Additional Resources	CDC Website – Gonorrhea KDHE Disease Investigation Guideline – Gonorrhea

Haemophilus influenzae (invasive)

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Onset is frequently sudden with symptoms of fever, vomiting, lethargy, and/or meningeal irritation. Invasive disease occurs when the infecting bacterium enters a normally sterile site where bacteria are not normally present, such as the bloodstream, soft tissues, or cerebrospinal fluid. Disease may present as various syndromes, including septicemia, pneumonia, epiglottitis, pericarditis, peritonitis, and septic arthritis.
Infectious Agent	*Haemophilus influenzae*
Mode of Spread	By droplet infection and direct/indirect contact with discharges from nose and throat during infections.
Incubation Period	Unknown; probably 1 to 4 days
Period of Communicability	Communicable as long as organisms are present. Communicability ends within 24 to 48 hours of the initiation of effective antibiotic therapy.
Control Measures	There are no isolation requirements for persons with invasive *Haemophilus influenzae* that are not hospitalized. Antimicrobial prophylaxis may be recommended for some contacts. Chemoprophylaxis is not recommended for contacts of persons with invasive disease caused by non-b *Haemophilus influenzae.* Implement control measures for type B or unknown serotypes. Each person with meningitis caused by *Haemophilus influenzae* shall remain in isolation for 24 hours after initiation of antibiotic therapy.
Contact Investigation	Contacts for invasive *Haemophilus influenzae* type b (Hib) are defined as household contacts. Depending on age, vaccination status, and health status, some household contacts may need antimicrobial prophylaxis. There's a vaccine that can prevent Hib disease, but not the other types ("strains") of *Haemophilus influenzae* bacteria. Some close contacts will need antibiotics, but all should be informed about their risk of disease and benefits of vaccination, educated on the incubation period and the need to seek medical care if symptoms develop, and remain under active surveillance for at least seven days after their last contact with the case to monitor for symptoms.
Duration of Illness	Disease brought on by *Haemophilus influenzae* will last until an appropriate treatment regimen has been completed
Exclusion and Readmission Criteria	There are no exclusion requirements for persons with invasive *Haemophilus influenzae* that are not hospitalized. Droplet precautions are required for hospitalized patients until 24 hours have passed following initiation of antibiotic therapy.
Additional Resources	CDC Website – *Haemophilus influenzae* KDHE Disease Investigation Guidelines – *Haemophilus influenzae*

Hand, Foot, and Mouth Syndrome (Vesicular stomatitis)

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Hand, foot, and mouth disease usually starts with a fever, reduced appetite, malaise, and sore throat. One or two days after fever starts, painful sores can develop in the mouth. A skin rash develops over one to two days. The rash has flat or raised red spots, sometimes with blisters. The rash is usually on the palms of the hands and soles of the feet; it may also appear on the knees, elbows, buttocks or genital area.
Infectious Agent	Enterovirus, especially Coxsackievirus A16 and Enterovirus 71
Mode of Spread	Virus is found in an infected person's nose and throat secretions, blister fluid, and feces. Transmission occurs through close personal contact, coughing and sneezing, contact with feces, or contact with contaminated objects and surfaces.
Incubation Period	Usually 3 to 6 days
Period of Communicability	During acute stage and perhaps longer
Control Measures	Washing hands often with soap and water, especially after changing diapers and using the toilet. Cleaning and disinfecting frequently touched surfaces and soiled items, including toys. Avoiding close contact such as kissing, hugging, or sharing eating utensils or cups with people with hand, foot, and mouth disease.
Contact Investigation	There is no contact investigation requirement for individuals with hand, foot, and mouth syndrome.
Duration of Illness	Duration of illness is 7 to 10 days
Exclusion and Readmission Criteria	There are no exclusion requirements for children with hand, foot, and mouth disease; however, it is recommended children with fever and rash should stay home from school until fever free.
Additional Resources	CDC Website – Hand, Foot, and Mouth Disease

Hepatitis A

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of positive IgM test results.**
Signs and Symptoms	Abrupt onset with fever, malaise, anorexia, nausea, abdominal pain, and sometimes diarrhea. Jaundice, dark urine and clay-colored stool follow a few days later.
Infectious Agent	Hepatitis A virus
Mode of Spread	Direct and indirect person-to-person spread via the fecal-oral route. Rarely, blood-borne transmission can occur during the viremic phase of the disease.
Incubation Period	Usually 28 to 30 days, with a range from 15 to 50 days.
Period of Communicability	Most infectious one to two weeks before symptom onset continuing until two weeks after non-jaundice symptom onset or one week after jaundice onset.
Control Measures	Contacts who are not immune to hepatitis A should be administered a single dose of hepatitis A vaccine (12 months – 40 years) or immunoglobulin (Ig). Prophylaxis should be given within 14 days of exposure if possible.
Contact Investigation	When identifying contacts consider: those with close personal contact, including household and sexual contacts, persons who have shared illicit drugs with an infectious case, and daycare contacts; persons in schools, hospitals, long term care facilities and other work settings with at-risk contacts and evidence of transmission; and food service workers sharing the same shift as the infected food handler, and in some instances persons eating food prepared by the infected food handler.
Duration of Illness	Duration of acute illness is usually less than 2 months but some may be ill as long as 6 months.
Exclusion and Readmission Criteria	Persons with hep A are required be excluded from working as a food employee, healthcare worker, and attending or working in a child care facility for 14 days following the onset of illness or seven days following the onset of jaundice. Each susceptible contact shall be excluded from working as a food employee, healthcare worker, or child care facility for 28 days from last exposure to an infectious case unless a prophylactic dose of immune globulin (IG) or hepatitis A vaccine is administered within 14 days of exposure to a person with an infectious case.
Additional Resources	CDC Website – Hepatitis A CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Hepatitis A FoodSafety.gov – Hepatitis A

Hepatitis B

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Infection may be acute or chronic, both of which may be asymptomatic. If symptoms are present, onset is usually subtle with loss of appetite, vague abdominal discomfort, nausea, vomiting and sometimes arthralgia and rash often progressing to jaundice. Fever may be absent or low-grade. Liver enzyme levels can be markedly elevated.
Infectious Agent	Hepatitis B Virus (HBV)
Mode of Spread	HBV is transmitted through blood or body fluids. The highest concentrations of the virus are in blood; lower titers are in semen and even lower titers in saliva. Infection is spread through sexual contact, sharing needles, and perinatal transmission from mother to infant.
Incubation Period	Usually 60 to 90 days, with a range from 45 to 160 days.
Period of Communicability	A person is considered infectious as long as Hepatitis B surface antigen (HBsAg) is detectable. Most people are infectious from 1-2 months before to 1-2 months after the onset of symptoms. Persons who have chronic Hepatitis B (i.e., carriers) remain infectious indefinitely.
Control Measures	For contacts that are fully vaccinated, no testing or treatment is needed. For those contacts that have not completed the hepatitis B series the remaining doses should be administered. Unvaccinated contacts should receive the full series of hepatitis B vaccine. For those contacts with sexual exposure within 14 days prior or initial percutaneous exposure within seven days prior should also receive a dose of hepatitis B immune globulin.
Contact Investigation	Contacts are defined as household members, persons with mucosal or percutaneous exposure to infectious body fluid of an infectious person, and sexual partners.
Duration of Illness	Duration of acute illness is usually several weeks but can persist up to 6 months.
Exclusion and Readmission Criteria	There is no exclusion requirement. Persons with hep B should not be excluded from work, school, play, child care, or other settings. There is no evidence of HBV transmission from food handlers, teachers, or other service providers in the absence of blood-to-blood contact.
Additional Resources	CDC Website – Hepatitis B CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Hepatitis B CDC Emergency Needlestick Information

Hepatitis C

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Symptoms include fever, fatigue, dark urine (tea/cola colored), clay-colored stool, abdominal pain, appetite loss, nausea, vomiting, joint pain and/or jaundice, but nearly 80% of acutely infected people experience no symptoms.
Infectious Agent	Hepatitis C Virus (HCV)
Mode of Spread	Transmitted primarily through large or repeated percutaneous exposures to infectious blood, such as injection drug use (currently the most common means of HCV transmission in the United States); receipt of donated blood, blood products, and organs (once a common means of transmission but now rare in the United States since blood screening became available in 1992); needle-stick injuries in healthcare settings; and birth to an HCV-infected mother. HCV can also be spread infrequently through sex with an HCV-infected person (an inefficient means of transmission); sharing personal items contaminated with infectious blood, such as razors or toothbrushes (also inefficient vectors of transmission); and other healthcare procedures that involve invasive procedures, such as injections (usually recognized in the context of outbreaks).
Incubation Period	Usually 6 to 9 weeks, with a range from 2 weeks to 6 months.
Period of Communicability	From one or more weeks prior to onset; may persist indefinitely with carrier state is common.
Control Measures	There is no prophylaxis available for contacts; refer at-risk contacts for medical evaluation that includes appropriate testing, counseling and follow-up. Provide education on avoiding further exposures and to ensure proper medical care is obtained and precautions taken if symptoms develop.
Contact Investigation	At-risk contacts are defined as individuals with mucosal or percutaneous exposure to blood of an infectious person. Children born to hepatitis C positive mothers are also considered to be at-risk contacts.
Duration of Illness	Most persons infected with hepatitis C will develop chronic infections.
Exclusion and Readmission Criteria	There is no exclusion requirement. Persons should not be excluded from school, play, child care, or other settings on the basis of their hepatitis C infection status. There is no evidence of HCV transmission from food handlers, teachers, or other service providers in the absence of blood-to-blood contact.
Additional Resources	CDC Website – Hepatitis C CDC Fact Sheets KDHE Disease Investigation Guideline – Hepatitis C CDC Emergency Needlestick Information

Herpes

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Genital herpes sores usually appear as one or more blisters on or around the genitals, rectum or mouth. The blisters break and leave painful sores that may take weeks to heal. These symptoms are sometimes called "having an outbreak." The first time someone has an outbreak they may also have flu-like symptoms such as fever, body aches, or swollen glands.
Infectious Agent	Herpes simplex type 1 virus and herpes simplex type 2 virus
Mode of Spread	You can get herpes by having vaginal, anal, or oral sex with someone who has the disease. Fluids found in herpes sore carry the virus, and contact with those fluids can cause infection. You can also get herpes from an infected sex partner who does not have a visible sore or who may not know he or she is infected because the virus can be released through your skin and spread the infection to your sex partner(s).
Incubation Period	Ranges from 2 days to 2 weeks
Period of Communicability	Infection may be transmitted during periods of both symptomatic and asymptomatic shedding of virus. Person should be advised not to resume sexual activity until lesions have completely healed.
Control Measures	Public education includes recognition of disease, awareness of modes of transmission, complications of the disease, and the benefits of practicing safe sex. Emphasize hand washing. To prevent transmission among sexual partners, daily suppressive therapy with antiviral medication for herpes can reduce the likelihood of transmission to partners. To prevent transmission among wrestlers, wrestlers with open herpetic lesions should be excluded from wrestling even with treatment. However, clearance to wrestle can be given five days after the lesions are dried or crusted.
Contact Investigation	There is no contact investigation requirement for individuals with herpes.
Duration of Illness	Currently, there is no cure for herpes and the disease does not resolve on its own.
Exclusion and Readmission Criteria	There is no exclusion for persons infected with herpes.
Additional Resources	CDC Website - Herpes

HIV/AIDS

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Symptoms associated with recent HIV infection (i.e., acute retroviral syndrome) are non-specific and may include fever, malaise, lymphadenopathy, pharyngitis, headache, night sweats, myalgia, and rash. Symptoms usually occur 2-3 weeks after initial infection. Most persons remain asymptomatic for years after the initial infection. Eventually, all HIV-infected individuals begin to exhibit symptoms consistent with progressive immunosuppression and frequently become infected with a variety of opportunistic infections.
Infectious Agent	Human Immunodeficiency Virus (HIV)
Mode of Spread	Transmission occurs when blood, blood products, semen, vaginal fluids, or breast milk from an infected person enters the bloodstream of another person. This may occur through sexual contact, sharing of HIV-contaminated needles, transfusion of infected blood or its components, transplantation of infected tissues or organs and breastfeeding.
Incubation Period	Highly variable; antibodies are usually detectable 3 weeks to 3 months after initial infection. About 50% of HIV-infected persons develop clinical AIDS within 10 years of infection if left untreated.
Period of Communicability	An HIV-infected individual is infectious for life, although infectivity may vary significantly over time. The presence of other sexually transmitted infections (STI) may increase infectiousness.
Control Measures	Sexual or needle sharing partners of cases should not donate blood, plasma, organs for transplantation, tissues, cells, semen for artificial insemination or breast milk for human milk banks.
Contact Investigation	A contact is any sexual and/or needle sharing partner(s) within the past year and any spouse(s) within the past 10 years.
Duration of Illness	Currently, there is no cure for HIV/AIDS and the disease does not resolve on its own.
Exclusion and Readmission Criteria	Children with HIV infection should not be excluded from school. In the absence of blood exposure, the transmission of HIV will not occur in a school setting including contact with saliva or tears.
Additional Resources	CDC Website – HIV/AIDS KDHE Disease Investigation Guideline – HIV/AIDS CDC Emergency Needlestick Information

Influenza (Flu)

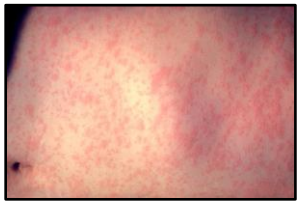
	**Only individual cases of <u>novel influenza A virus</u> infection are reportable to KDHE within 4 hours of identification by phone.**
	**Influenza infections resulting in the death of any child less than 18 years of age is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following suspicion, regardless of laboratory evidence.**
Signs and Symptoms	Abrupt onset of fever, headache, muscle aches, cough, sore throat, and malaise; some people have vomiting and diarrhea.
Infectious Agent	Influenza virus
Mode of Spread	Influenza is spread from person-to-person, primarily by respiratory tract droplets created by coughing or sneezing. Contact with respiratory tract droplet-contaminated surfaces is another possible mode of transmission.
Incubation Period	Usually 1 to 4 days, with an average of 2 days
Period of Communicability	One day before symptoms develop and up to seven days after onset of symptoms.
Control Measures	Yearly influenza vaccination is recommended for everyone six months and older. Students should be taught about importance of hand washing and covering nose and mouth when sneezing and coughing. Antiviral drugs can be administered if warranted to exposed individuals.
Contact Investigation	Contact investigation for influenza is only needed in the event of an outbreak situation. Focus on individuals who are in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of an infected person. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, physical examination, or any other contact between persons that is likely to result in exposure to respiratory droplets.
Duration of Illness	Usually 2 to 7 days
Exclusion and Readmission Criteria	Persons with influenza shall remain in home isolation until fever free for 24 hours without the aid of fever reducing medications AND overall symptoms are getting better, ill persons may leave home isolation temporarily while seeking medical care.
Additional Resources	Memorandum 05/22/2024 CDC Website – Influenza CDC: Flu and Children

Listeria

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	A person with listeriosis usually has fever and muscle aches, sometimes preceded by diarrhea or other gastrointestinal symptoms. Almost everyone who is diagnosed with listeriosis has "invasive" infection, in which the bacteria spread beyond the gastrointestinal tract. Pregnant women typically experience fever and other non-specific symptoms, such as fatigue and aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery, or life-threatening infection of the newborn. In older adults or those with immunocompromising conditions, symptoms can include headache, stiff neck, confusion, loss of balance, and convulsions in addition to fever and muscle aches.
Infectious Agent	*Listeria monocytogenes*
Mode of Spread	Transmission usually occurs through ingestion of contaminated foods.
Incubation Period	Average of 21 days with a range from 3 to 70 days.
Period of Communicability	May extend for months or longer if untreated. *L. monocytogenes* may be shed for months in the stool of infected persons, although person-to-person transmission is rare.
Control Measures	Inform people at higher risk, such as pregnant women and persons with weakened immune systems, of methods to avoid listeriosis, including avoiding soft cheeses such as Brie, Camembert, and Mexican style cheeses, and deli meats. Cook leftover foods or hot dogs until 165°F. Thoroughly cook food from animal sources such as beef, pork, or poultry and consume only pasteurized dairy products. Thoroughly wash raw fruits and vegetables before eating. Wash hands, knives, and cutting boards after handling uncooked foods. Avoid the use of untreated manure on food crops.
Contact Investigation	Contacts are considered to be anyone exposed to a specific food identified as a likely source of contamination. Until a specific food has been incriminated, anyone sharing food with case can be considered a potential contact.
Duration of Illness	Days to weeks, depending on the severity of illness.
Exclusion and Readmission Criteria	Workers in schools, residential programs, daycare and healthcare facilities, who feed, give mouth care or dispense medications to clients, should follow the same restrictions as food handlers. Food handlers with diarrhea, fever or vomiting must be restricted from handling food or be excluded from work if they serve high risk groups until symptoms have resolved for 24 hours.
Additional Resources	CDC Website – Listeriosis KDHE Disease Investigation Guidelines – Listeriosis FoodSafety.gov – Listeria

Measles (Rubeola)

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Typically begins with a high fever, cough, runny nose (coryza) and red, watery eyes (conjunctivitis). Three to five days later a red blotchy rash breaks out, first appearing on the head then spreading downward to the neck, trunk, arms, legs, and feet. Two to three days after symptoms begin, tiny white spots (Koplik spots) may appear inside the mouth.
Infectious Agent	Measles virus
Mode of Spread	Airborne by droplet spread or direct contact with nasopharyngeal secretions.
Incubation Period	Most commonly 10 days, but may be 7 to 18 days from exposure to onset of fever; rash usually develops 14 days after exposure, but rarely as long as 19 to 21 days.
Period of Communicability	Cases are contagious 4 days before the onset of rash to 4 days after the rash appears.
Control Measures	All susceptible contacts should be vaccinated with a measles containing vaccine (MMR) within 72 hours of exposure. Immune globulin (IG) should instead be given to those that are too young to be vaccinated, pregnant, and severely immunocompromised. Please contact KDHE or your local health department for more information about IG.
Contact Investigation	Exposure is defined as direct contact with a person infectious for measles and/or sharing the same confined airspace with a person infectious for measles, including up to two hours after the infectious person leaves. This includes classrooms, a home, clinic waiting room, examination room, airplane, etc. Susceptible contacts are those that do NOT have documentation of receipt of a measles-containing vaccine (MMR), laboratory evidence of immunity, or born before 1957.
Duration of Illness	Duration of illness is usually 5 to 12 days.
Exclusion and Readmission Criteria	Persons with measles are required to remain in home isolation for 4 days following the onset of rash, except when seeking medical care. Each susceptible contact that is not age appropriately vaccinated within 72 hours of first exposure to an infectious measles case is required to be excluded from working in an adult care home, correctional facility, or healthcare facility and attending or working in a school, child care facility, or adult daycare for 21 days following the last exposure to an infectious case.
Additional Resources	CDC Website – Measles CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Measles



Meningococcal Disease

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	An invasive infection with *N. meningitidis* may cause several clinical syndromes, including meningitis, sepsis, and pneumonia. Meningitis is the most common presentation of infection. Symptoms of meningitis typically include the sudden onset of a stiff neck, high fever and an intense headache. Nausea, vomiting and mental confusion are often present. The case-fatality rate for meningococcal meningitis is between 5-15%. Meningococcal sepsis (meningococcemia) typically presents with the abrupt onset of fever, cold hands and feet, cold chills, rapid breathing, and sometimes a rash (may be maculopapular early on, but progresses to petechial or purpuric). The case-fatality rate of meningococcemia is up to 40%.
Infectious Agent	*Neisseria meningitidis*
Mode of Spread	Direct contact with an infected person's oral and/or nasal secretions, including but not limited to: kissing, sharing a toothbrush or eating utensil and other markers of close social contact.
Incubation Period	Usually 3 to 4 days, with a range from 2 to 10 days.
Period of Communicability	As long as *N. meningitidis* are present in the nasopharynx; seven days prior to illness onset to 24 hours after initiation of an appropriate antibiotic treatment.
Control Measures	Treatment with antibiotics is recommended for all close contacts regardless of immunization status if exposures were within the last 14 days. Contacts should be actively monitored for symptoms for at least 10 days after their last contact with the infectious person.
Contact Investigation	Identify contacts based on activities seven days prior to illness onset until 24 hours after appropriate antibiotic treatment. The following are considered close contacts: household contacts, child care or daycare contacts, individuals with direct exposure to the ill person's secretions, persons performing mouth-to-mouth resuscitation or unprotected contact during endotracheal intubation or suctioning, persons that frequently slept or ate in same dwelling as patient, or passengers seated directly next to the infectious person during airline flights lasting more than eight hours.
Duration of Illness	Duration of illness depends on type of illness and treatment.
Exclusion and Readmission Criteria	There are no exclusion requirements for persons with meningococcal disease that are not hospitalized. Droplet precautions are required for hospitalized patients until 24 hours have passed following initiation of antibiotic therapy.
Additional Resources	CDC Website – Bacterial Meningitis WHO Website – Meningococcal Meningitis CDC Fact Sheet: Kids KDHE Disease Investigation Guideline – Meningococcal Infections

Meningitis, Bacterial (Non-Meningococcal)

	**This disease is <u>ONLY</u> reportable if *Streptococcus pneumoniae, Listeria monocytogenes,* or *Haemophilus influenzae* are the cause of illness; it must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	The symptoms of meningitis may not be the same for every person. Common symptoms are high fever, severe headache, stiff neck, drowsiness, nausea, and vomiting. Additional symptoms include rashes and sensitivity to light. In infants, the symptoms are difficult to identify and may include fever, irritability, lack of appetite and difficulty waking the infant up.
Infectious Agent	Various bacteria can cause meningitis, but the common causes will vary by age group. **Newborns**: *Streptococcus pneumoniae, Listeria monocytogenes*. **Infants and Children**: *Streptococcus pneumoniae, Haemophilus influenzae*. **Adolescents and Young Adults**: *Streptococcus pneumoniae*. **Older Adults**: *Streptococcus pneumoniae, Haemophilus influenza, Listeria monocytogenes.*
Mode of Spread	How people spread the bacteria often depends on the type of bacteria causing illness. Generally, *Streptococcus pneumonia* and *Haemophilus influenzae* are spread through direct contact with an infected person's oral and/or nasal secretions, including but not limited to: kissing, sharing a toothbrush or eating utensil and other markers of close social contact. *Listeria monocytogenes* can spread through food (eating contaminated food). Close contact may result in becoming infected with the pathogen that made that person sick, but contacts are not likely to develop meningitis as a complication.
Incubation Period	Varies depending on the infectious agent; see disease specific sections.
Period of Communicability	Varies depending on the infectious agent; see disease specific sections.
Control Measures	Bacterial meningitis caused by *Streptococcus pneumonia* and *Listeria monocytogenes* do not require prophylactic measures, but require investigation led by the local health department with disease-specific guidelines. Prophylactic measures may be recommended for contacts exposed to persons with bacterial meningitis caused by *Haemophilus influenzae* and also requires investigation led by the local health department.
Contact Investigation	There are no contact investigation requirements for individuals with bacterial meningitis caused by *Streptococcus pneumonia* or *Listeria monocytogenes*. Depending on the type of *Haemophilus influenzae* causing bacterial meningitis, contact investigation may need to be conducted to identify persons who would have been exposed to provide appropriate prophylaxis recommendations.
Duration of Illness	Duration of illness depends on type of illness and treatment.
Exclusion and Readmission Criteria	There are no isolation requirements for non-Neisseria bacterial meningitis except for hospitalized persons with bacterial meningitis caused by *Haemophilus influenzae*. Generally, it is recommended persons be kept out of school or child care until they are fever free for 24 hours without the use of fever suppressing medications.
Additional Resources	CDC Website – Bacterial Meningitis KDHE Disease Investigation Guideline – Meningitis, Bacterial Disease

Meningitis, Viral

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Sudden onset of fever, headache, and stiff neck, nausea, vomiting, sensitivity to light, and altered mental status (confusion).
Infectious Agent	A number of different viruses can cause meningitis but enteroviruses are the most common.
Mode of Spread	Varies depending on the virus.
Incubation Period	Dependent upon the virus causing meningitis.
Period of Communicability	Dependent upon the virus causing meningitis.
Control Measures	Wash your hands often with soap and water, especially after changing diapers, using the toilet, or coughing or blowing your nose. Avoid touching your face with unwashed hands. Avoid close contact such as kissing, hugging, or sharing cups or eating utensils with people who are sick. Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands. Clean and disinfect frequently touched surfaces, such as toys and doorknobs, especially if someone is sick. Stay home when you are sick.
Contact Investigation	There is no contact investigation requirement for individuals with viral meningitis.
Duration of Illness	Duration of illness is usually 7 to 10 days.
Exclusion and Readmission Criteria	There are no exclusion requirements. It is recommended ill persons remain at home until no longer symptomatic; fever free for 24 hours without the use of fever suppressing medications.
Additional Resources	CDC Website – Viral Meningitis CDC Fact Sheet: Kids

Molluscum Contagiosum

⊘	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	A viral disease of the skin characterized by 1 to 20 discrete, 2- to 5-mm-diameter, flesh-colored to translucent, dome-shaped papules, some with central umbilication. Lesions commonly occur on the trunk, face, and extremities but rarely are generalized.
Infectious Agent	*Molluscum Contagiosum* virus
Mode of Spread	Direct contact, transmission can be sexual or non-sexual. Lesions can be disseminated by autoinoculation.
Incubation Period	Varies between 2 to 7 weeks, but may take as long as 6 months
Period of Communicability	The period of communicability is unknown but probably as long as lesions persist.
Control Measures	Avoid contact, sharing bathtubs, bath towels, or sponges with the affected person.
Contact Investigation	There is no contact investigation requirement for individuals with molluscum contagiosum.
Duration of Illness	Usually 6 to 12 months, although the duration may be up to 4 years.
Exclusion and Readmission Criteria	There are no exclusion requirements. Molluscum contagiosum should not prevent a child from attending child care or school. When possible, lesions not covered by clothing should be covered by a watertight bandage.
Additional Resources	CDC Website – Molluscum Contagiosum

Mumps

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Swelling of one or more of the salivary glands (e.g., parotid, sublingual or submandibular glands). Nonspecific symptoms including low-grade fever, myalgia, anorexia, malaise, and headache may precede parotitis. Orchitis, usually unilateral, occurs in 20-30% of post-pubertal males and oophoritis in approximately 5% of post-pubertal females. Symptomatic meningitis occurs in up to 10% of cases. Pancreatitis, neuritis, arthritis, mastitis, nephritis, thyroiditis and pericarditis may occur.
Infectious Agent	Mumps virus, a member of the Paramyxoviridae family
Mode of Spread	Direct contact with an infected person, droplet spread, and indirectly by items contaminated by the saliva of an infected person
Incubation Period	Usually 16 to 18 days, with a range from 12 to 25 days.
Period of Communicability	From 7 days before the onset of illness until 9 days after. Maximum infectiousness occurs between 2 days before and 5 days after onset of illness with the initial day of swelling counted as day 0.
Control Measures	Identify all susceptible contacts. Use of mumps vaccine after exposure has not shown to prevent or alter course of disease; therefore susceptible contacts are required to be excluded. During an outbreak, it is recommended persons identified as being at increased risk for mumps receive a dose of mumps vaccine, regardless of current immunization status.
Contact Investigation	Identify and record all the case's occupations and activities while infectious. Exposure is defined as shared confined space in close proximity (3 feet). In a school setting, classmates sitting near a person with mumps and persons sharing items (e.g., cups, utensils) should be considered. Collect immunization status for all contacts. Susceptible contacts are those that do NOT have documentation of receipt of a mumps-containing vaccine (MMR), laboratory evidence of immunity, or born before 1957.
Duration of Illness	Duration of illness is usually 7 to 10 days.
Exclusion and Readmission Criteria	Persons with mumps are required to remain in home isolation for 9 days from the onset of any symptoms and at least 5 days following the onset of parotitis, except when seeking medical care. Each susceptible contact is required to be excluded from working in an adult care home, correctional facility, or healthcare facility and attending or working in a school, child care facility, or adult daycare from day 12 to day 25 after exposure to an infectious case.
Additional Resources	CDC Website – Mumps CDC 3rd Dose Recommendation CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Mumps

Norovirus

⊘	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Diarrhea, vomiting, nausea, and abdominal pain commonly accompanied by fever, headache, muscle aches.
Infectious Agent	Norovirus is a diverse group of viruses belonging to the *Caliciviridae* family.
Mode of Spread	Spread through the fecal-oral route when a person consumes contaminated food or water. It can also be transmitted through touching contaminated surfaces or objects.
Incubation Period	Usually 12 to 48 hours after first exposure to the virus with a range up to 72 hours
Period of Communicability	Persons usually are infectious from one day prior to onset of symptoms to up to 2 weeks or more after symptoms have resolved.
Control Measures	Washing hands with soap and water, washing fruits and vegetables, cooking seafood thoroughly, and when you are sick do not prepare foods for others. Clean and disinfect contaminated services. .
Contact Investigation	Contact investigation for norovirus is only needed in the event of an outbreak situation. Contacts are those who share similar exposure activities with the case, such as having common food/drink, animal, or recreational water sources.
Duration of Illness	Duration of illness is usually 1 to 3 days.
Exclusion and Readmission Criteria	Persons with norovirus are not required to be excluded; however, it is recommended persons not attend school until 24 hours after symptoms resolve.
Additional Resources	CDC Website – Norovirus CDC Multimedia Resources FoodSafety.gov – Norovirus (Norwalk Virus)

Pertussis (Whooping Cough)

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following suspicion, regardless of laboratory evidence.**
Signs and Symptoms	Begins with runny nose, low-grade fever and an occasional cough. The cough gradually worsens and one to two weeks after onset, paroxysms of coughing (fits), inspiratory "whoop," or post-tussive vomiting occur.
Infectious Agent	*Bordetella pertussis*, a bacterium
Mode of Spread	Through direct contact with respiratory secretions, such as through a cough or sneeze or large aerosol droplets from the respiratory tract. Indirect spread through contaminated objects rarely occurs.
Incubation Period	Usually 7 to 10 days, with a range from 4 to 21 days.
Period of Communicability	Pertussis is highly communicable during the first two weeks of the disease. Communicability gradually decreases and becomes negligible about 3 weeks after the onset of cough. When treated with appropriate antibiotics, patients are no longer contagious after completion of antibiotics.
Control Measures	Identify contacts and monitor for symptoms for 21 days following their last exposure. Household contacts and high risk contacts (infants under 12 months, pregnant women in the 3rd trimester of pregnancy, all persons with pre-existing health conditions that may be exacerbated by a pertussis infection [e.g. immunocompromised persons and patients with moderate to severe medically treated asthma], and contacts who themselves have close contact with these persons) should receive antimicrobial prophylaxis to prevent pertussis.
Contact Investigation	Identify and record all of the case's activities while infectious. Exposure is defined as shared confined space in close proximity for greater than one hour with a person who is symptomatic and coughing or direct face-to-face contact and direct contact with respiratory secretions of a person who is coughing. Monitor contacts (regardless of immunization status) for development of symptoms for 21 days following exposure. Provide education on incubation period, symptoms, and actions to take if symptoms develop.
Duration of Illness	Duration of illness is 6 to 10 weeks.
Exclusion and Readmission Criteria	Each infected person shall remain in respiratory isolation for 3 weeks if untreated or until completion of an appropriate antibiotic. Close contacts should not be excluded, regardless of immunization status, but monitored for 21 days for signs and symptoms of pertussis. Each contact who develops symptoms compatible with pertussis shall be considered as having a case of pertussis and shall be kept in isolation until requirements for control of cases are met or until pertussis is no longer suspected.
Additional Resources	CDC Website - Pertussis CDC Fact Sheet: Kids CDC Fact Sheet: Parents CDC Fact Sheet: Spanish KDHE Disease Investigation Guideline – Pertussis

Pinworm Infection (Enterobiasis)

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Itching around the anus which can lead to difficulty sleeping and restlessness. Symptoms are caused by the female pinworm laying her eggs. Symptoms of pinworm infection usually are mild and some infected people have no symptoms.
Infectious Agent	*Enterobius vermicularis*, a nematode or roundworm
Mode of Spread	Pinworm infection is spread by the fecal-oral route, that is by the transfer of infective pinworm eggs from the anus to someone's mouth, either directly by hand or indirectly through contaminated clothing, bedding, food, or other articles.
Incubation Period	The time from ingestion of an egg until an adult gravid female migrates to the perianal region is 1 to 2 months or longer.
Period of Communicability	A person remains infectious as long as female nematodes are discharging eggs on perianal skin. Eggs remain infective in an indoor environment usually for 2 to 3 weeks. Humans are the only known natural hosts; dogs and cats do not harbor *Evermicularis*.
Control Measures	All members of a household may need to be treated for pinworm infection simultaneously. Encourage regular showers and avoid baths. Encourage proper hand washing with soap and warm water, frequent changes and washing of underwear, night clothing, and bed linens. Discourage nail biting and scratching of anal area.
Contact Investigation	There is no contact investigation requirement for individuals with pinworm infection unless an outbreak is detected.
Duration of Illness	Pinworm infestation will continue until an appropriate treatment regimen has been completed.
Exclusion and Readmission Criteria	None recommended.
Additional Resources	CDC Website – Pinworms

Poliomyelitis

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Symptoms include fever, headache, nausea and vomiting, stiffness in neck and back, with or without paralysis. Paralysis is typically flaccid, asymmetric, and most commonly affects the lower extremities.
Infectious Agent	Poliovirus
Mode of Spread	Transmission is primarily through the fecal-oral route. However, the virus can be transmitted by indirect contact with infectious saliva or feces, or by contaminated sewage or water.
Incubation Period	Usually 7 to 14 days for paralytic poliomyelitis, with a range from 3 to 35 days.
Period of Communicability	Infectivity is greatest 7-10 days before and after onset of symptoms. In symptomatic and asymptomatic cases, poliovirus is found in pharyngeal secretions 36 hours after exposure and in the feces 72 hours after exposure. Poliovirus can remain present in the stool from 3 to 6 weeks.
Control Measures	Immunization is effective in controlling poliomyelitis. Isolation of infected persons is required. Active surveillance community-wide should be initiated for 2 incubation periods (i.e., 70 days) beyond the onset of the last case in the area.
Contact Investigation	Identify a case's activities 10 days prior to and after onset of symptoms. Identify contacts and their immunization status. Exposure is defined as contact with the stool or oral secretions (e.g. saliva) of an infectious person. A susceptible contact is defined as an individual with no written record of a complete polio immunization series. Identify potential transmission settings.
Duration of Illness	Any recovery from paralysis usually begins within 1 month. Between 25 - 40% of persons who contract paralytic poliomyelitis in childhood may develop "post-polio syndrome" 30 - 40 years later. This syndrome is characterized by muscle pain, exacerbation of existing weakness, and/or development of new paralysis or weakness.
Exclusion and Readmission Criteria	There are no exclusion requirements for persons with polio that are not hospitalized. Contact precautions are required for hospitalized patients For the duration of the illness.
Additional Resources	CDC Website – Poliomyelitis KDHE Disease Investigation Guideline – Polio

Human Rabies

	All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.
Signs and Symptoms	A viral disease of the central nervous system that is uniformly fatal in humans.
Infectious Agent	Rabies virus
Mode of Spread	Through saliva, which more commonly occurs from the bite of an infected animal. Rabies virus is also found in neural tissue of infected animals. Less common modes of transmission include contamination of mucous membranes (eyes, nose, mouth), and corneal and organ transplantations.
Incubation Period	In humans, usually 14 to 56 days; range 10 days to ≥1 year. Incubation tends to shorten with increased severity of exposure and exposures closer to the brain.
Period of Communicability	Varies by species; dogs, cats, and ferrets can shed the virus in their saliva up to 10 days before onset of clinical signs and throughout the course of the disease. Wild animals may have virus present in saliva for longer periods before onset of symptoms.
Control Measures	Immunize all dogs and cats. Obtain medical care for all animal bites and scratches. When appropriately administered, human rabies vaccine and rabies immune globulin are safe and effective in preventing disease in persons exposed to rabid or suspected rabid animals.
Contact Investigation	Any individual receiving a bite from a potentially infected animal or having exposure to infectious saliva or brain material with mucous membranes, would need to be assessed for post-exposure prophylaxis. Any report of an encounter with a potentially rabid animal should be discussed with your local health department.
Duration of Illness	Currently, there is no cure for human rabies and the disease does not resolve on its own.
Exclusion and Readmission Criteria	There is no exclusion for an individual who has been exposed to rabies. Post-exposure prophylaxis is strongly recommended.
Additional Resources	CDC Website – Rabies Public Veterinary Medicine – Rabies Prevention CDC – Animals in Schools American Veterinary Medical Association – Animals in School KDHE Disease Investigation Guideline – Rabies

Ringworm (Tinea)

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	*Tinea Capitis*: scaly patches of baldness on the head *Tinea Corporis*: flat, spreading ring-shaped lesions on the body *Tinea Pedis*: scaling or cracking of the skin, especially between the toes, "athlete's foot." *Tinea Unguium*: one or more nails of the hand or foot gradually thicken, become discolored and brittle, or may become chalky and disintegrate.
Infectious Agent	Various species of Microsporum or Trichophyton which are fungi.
Mode of Spread	Direct skin-to-skin contact or indirect contact with contaminated items. Animals may also be infected.
Incubation Period	10 to 14 days for ringworm of the scalp; 4 to 10 days for ringworm of the body; unknown for ringworm of the nails and feet.
Period of Communicability	As long as lesions are present
Control Measures	Cases should avoid skin-to-skin contact with other individuals until the skin lesions are completely healed. Good hygiene, such as regular hand washing, is important. Avoid sharing personal items, such as hairbrushes and articles of clothing which have come in contact with infected areas.
Contact Investigation	Focus on close contacts of infected individuals who may have come in contact with the affected area(s).
Duration of Illness	Ringworm infection will continue until an appropriate treatment regimen has been completed.
Exclusion and Readmission Criteria	Cases may attend school if receiving treatment, but should not participate in athletic activities involving skin-to-skin contact until skin lesions are completely healed.
Additional Resources	CDC Website – Ringworm National Institutes of Health Website – Ringworm

Rubella (German measles)

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Rash that starts on the face and spreads to the rest of the body and a low fever (less than 101 degrees). Older children and adults may also have swollen glands and symptoms like a cold before the rash appears. Aching joints occur in many cases, especially among young women. Birth defects if acquired by a pregnant woman include deafness, cataracts, heart defects, mental retardation, and liver and spleen damage (at least a 20% chance of damage to the fetus if a woman is infected early in pregnancy).
Infectious Agent	Rubella virus
Mode of Spread	Contact with nasopharyngeal secretions of infected persons through droplet spread or direct contact with cases.
Incubation Period	Usually 14 to 17 days, with a range from 14 to 21 days.
Period of Communicability	From about 7 days before to 4 days after onset of rash. Infants may shed the virus for several months.
Control Measures	Susceptible children persons will be excluded until 21 days after the onset of the last reported illness in the school or child care setting. Susceptible contacts include those who do NOT have documentation of receipt of a rubella containing vaccine (MMR), laboratory evidence of immunity, or born before 1957. Pregnant women should be referred to their obstetrician.
Contact Investigation	Individuals would be considered exposed if sharing a confined space in close proximity to an infectious case for longer than one hour, which includes all close personal contacts, educators, and classmates of the case at school and all direct caregivers and classmates of a case in a daycare.
Duration of Illness	Rash occurs 14 to 17 days after exposure and usually lasts about 3 days.
Exclusion and Readmission Criteria	A person with rubella are required to remain in home isolation for 7 days following onset of rash. Susceptible contacts are required to be excluded from working in an adult care home, correctional facility, or healthcare facility and attending or working in a school, child care facility, or adult daycare for 21 days following the last exposure to a case.
Additional Resources	CDC Website – Rubella CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Rubella

Salmonellosis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Abdominal pain, headache, diarrhea, fever, nausea, and sometimes vomiting.
Infectious Agent	*Salmonella*, a bacterium
Mode of Spread	Usually by ingestion of contaminated food from infected animals or contaminated by feces of an infected animal or person.
Incubation Period	Usually 12 to 36 hours, with a range from 6 to 72 hours. Prolonged incubation periods may be noted with low-dose ingestion.
Period of Communicability	Extremely variable, usually several days to several weeks dependent upon the course of infection. Prolonged asymptomatic fecal shedding can promote person-to-person transmission.
Control Measures	Good personal hygiene (i.e., hand washing), good food handling practices, and thorough cooking of all foods are important.
Contact Investigation	Children are a risk only if there is epidemiologic evidence of transmission, such as sharing food/drink or exposure to animal/recreational water sources, or if the infected child is unable to or fails to maintain good hygiene, including hand hygiene after toilet use.
Duration of Illness	Salmonella infections usually resolve in 5 to 7 days and often do not require treatment other than oral fluids.
Exclusion and Readmission Criteria	School attendees or employees with salmonellosis are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours. During a school-based outbreak, stronger exclusion measures may be warranted and will be based on consultations with the KDHE-BEPHI.
Additional Resources	CDC Website – Salmonellosis KDHE Disease Investigation Guideline – Salmonellosis FoodSafety.gov – Salmonella

Shiga-toxin producing *Escherichia coli* (STEC)

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Majority of cases present with an acute onset of diarrhea 3 to 4 days after exposure. Other symptoms include abdominal cramping and grossly bloody diarrhea. Fever may or may not be present. Severe cases can develop HUS that results in renal failure and death.
Infectious Agent	Shiga-toxin producing *Escherichia coli*
Mode of Spread	Fecal-oral, including: person-to-person, animal-to-person; waterborne and foodborne. Transmission occurs from consuming food or liquids, including water, contaminated with human or animal feces. Transmission may occur via types of sexual contact (e.g., oral-anal contact).
Incubation Period	Usually 3 to 4 days, with a range from 2 to 10 days
Period of Communicability	Variable, for as long as the organism is excreted; typically 1 week in adults and up to 3 weeks in some children.
Control Measures	With an understanding of and ability to practice good hygiene, children usually do not represent a risk of spreading this pathogen via the fecal-oral route. Children are a risk only if the infected child is unable to or fails to maintain good hygiene, including hand hygiene after toilet use. Children in diapers at any age constitute a far greater risk of spreading this enteric pathogen.
Contact Investigation	In school settings, only necessary if transmission has occurred. Then consider contacts who share similar exposure activities with the case, such as having common food/drink, animal, or recreational water sources.
Duration of Illness	Duration of illness is 5 to 10 days.
Exclusion and Readmission Criteria	School attendees or employees with STEC are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours.
Additional Resources	CDC Website – *Escherichia coli* KDHE Disease Investigation Guideline – STEC FoodSafety.gov – *E. coli*

Shigellosis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Diarrhea, fever, nausea, vomiting, intestinal cramps and/or constipation. When severe, stools contain blood, mucus, and pus.
Infectious Agent	*Shigella*, a bacterium
Mode of Spread	Fecal-oral transmission with a low infectious dose (10-200 organisms). Direct transmission is associated to poor hand washing and with certain sexual behaviors (e.g., oral-anal). Indirect transmission occurs via contaminated food, milk, water, inanimate objects (fomites) and houseflies (vectors).
Incubation Period	Usually 1 to 3 days, with a range from 12 to 96 hours. Up to 1 week for *Shigella dysenteriae*.
Period of Communicability	Communicability continues as long as organisms are excreted, usually at most four weeks after onset. Asymptomatic carriers may transmit infection. Antimicrobial treatment may decrease the shedding to a few days.
Control Measures	With an understanding of and ability to practice good hygiene, children usually do not represent a risk of spreading this pathogen via the fecal-oral route. Children are a risk only if the infected child is unable to or fails to maintain good hygiene, including hand hygiene after toilet use. Children in diapers at any age constitute a far greater risk of spreading *Shigella*. In school settings, exclude children with diarrhea, vomiting, and fever until symptoms resolve.
Contact Investigation	If there is a potential for disease transmission follow-up with all close contacts to determine if transmission has occurred and to identify any high risk situations.
Duration of Illness	Duration of illness is usually 4 to 7 days.
Exclusion and Readmission Criteria	School attendees or employees with shigellosis are not required to be excluded from school; however, it is recommended that children and staff not attend school until symptoms have resolved for 24 hours. During a school-based outbreak, stronger exclusion measures may be warranted and will be based on consultations with the KDHE-BEPHI.
Additional Resources	CDC Website – Shigellosis KDHE Disease Investigation Guideline – Shigellosis FoodSafety.gov – Shigella

Shingles (Herpes Zoster)

⊘	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Painful rash on one side of the face or body. The rash forms blisters that typically scabs over in 7-10 days and clears up in 2-4 weeks. Other symptoms include fever, headache, chills, and upset stomach.
Infectious Agent	Varicella-Zoster virus
Mode of Spread	Shingles cannot be passed from one person to another, but the virus that causes shingles (varicella zoster) can be spread from a person with shingles to a person who has never had chickenpox. They would develop chickenpox, not shingles. The virus is spread through direct contact with the fluid from blisters.
Incubation Period	Not spread person-to-person
Period of Communicability	Cases with shingles are infectious when the rash is in the blister-phase. Once the rash develops crusts, the person is no longer infectious.
Control Measures	Immunization against varicella zoster helps to reduce the risk of developing shingles. Persons with active draining lesions should keep sores covered by clothing or a dressing until lesions have crusted. Emphasize the importance of hand washing. Several antiviral medicines—acyclovir, valacyclovir, and famciclovir—are available to treat shingles. These medicines will help shorten the length and severity of the illness, but to be effective, they must be started as soon as possible after the rash appears.
Contact Investigation	There is no contact investigation requirement for individuals with shingles.
Duration of Illness	The rash forms blisters that typically scab over in 7 to 10 days and clears within 2 to 4 weeks.
Exclusion and Readmission Criteria	There is no regulation regarding exclusion of students or employees that attend or work at a school and have shingles, however it is recommended lesions be covered. If lesions cannot be covered, it is recommended that students or employees remain home until lesions are dried and crusted.
Additional Resources	CDC Website – Shingles

Staphylococcus aureus, Methicillin Resistant (MRSA) Infections

⊘	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	*Staphylococcus aureus* is carried on the skin of healthy individuals and sometimes is present in the environment. It may cause skin infections that look like pimples or boils, which can be red, swollen, painful, or have pus or other drainage.
Infectious Agent	*Staphylococcus aureus*, a bacterium
Mode of Spread	Skin infections are transmitted primarily by skin-to-skin contact and contact with surfaces that have come into contact with someone else's wound drainage.
Incubation Period	Variable, but commonly 4 to 10 days
Period of Communicability	As long as purulent lesions continue to drain or the carrier state persists.
Control Measures	Emphasize good personal hygiene and proper wound care. Open wounds should be covered with a clean dressing. Avoid sharing personal items. Avoid contact with other's wounds or bandages. Maintain a clean environment by frequently cleaning touched surfaces, sports equipment, and mats.
Contact Investigation	Close contact includes anyone who would have physical contact with the lesion(s) or had any physical contact with the drainage from the lesion(s). Also look into shared bedding/clothing with the case-patient.
Duration of Illness	Duration is highly variable and situation-dependent.
Exclusion and Readmission Criteria	Unless directed by a physician, students with MRSA infections should not be excluded from attending school.
Additional Resources	KDHE – Prevention of MRSA in Organized Sports Toolkit CDC Website – MRSA in Schools and Daycares CDC MRSA Information and Educational Resources (English & Spanish)

Streptococcal Infections, Group A

	**This disease is not reportable in the state of Kansas, but if an outbreak is identified then report to the Kansas Department of Health and Environment.**
Signs and Symptoms	Most often associated with streptococcal pharyngitis/tonsillitis and streptococcal skin infections (impetigo or pyoderma), there are several invasive clinical syndromes, including pneumonia, bacteremia and meningitis. Two major complications of streptococcal infections are acute glomerulonephritis and rheumatic fever. Invasive Group A Streptococcal infections (GAS) occur when the infecting bacterium is able to enter a normally sterile site where bacteria are not normally present, such as the bloodstream, soft tissues, or cerebrospinal fluid.
Infectious Agent	*Streptococcus pyogenes*, a bacterium
Mode of Spread	Person-to-person transmission by large droplet spread or by contact with respiratory secretions. Transmission rarely occurs by indirect contact through objects or hands.
Incubation Period	Usually 1 to 3 days
Period of Communicability	As long as bacteria are present in respiratory secretions. Cases treated with appropriate antibiotics are considered noninfectious after 24 hours of treatment.
Control Measures	Educate persons to perform proper hand washing, to cover mouth while coughing, and to dispose of used tissues properly. Symptomatic household members should be instructed to seek medical attention for testing (i.e., throat cultures) to assess the need for treatment.
Contact Investigation	Contact investigation is of no practical value for routine situations.
Duration of Illness	Duration of illness is highly variable depending on the infective agent.
Exclusion and Readmission Criteria	Each person with a Group A streptococcal infection is required to be excluded from working as a food employee, attending or working in a child care facility or school for 24 hours following initiation of appropriate antimicrobial therapy. Those who do not receive appropriate antimicrobial therapy shall be excluded for 10 days following onset of symptoms.
Additional Resources	CDC Website – Group A Streptococcal (GAS) Disease

Streptococcus pneumonia, invasive disease

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Onset is frequently sudden with symptoms of fever, vomiting, lethargy, and/or meningeal irritation. Invasive disease occurs when the infecting bacterium enters a normally sterile site where bacteria are not normally present, such as the bloodstream, soft tissues, or cerebrospinal fluid. Disease may present as various syndromes, including septicemia, pneumonia, and meningitis.
Infectious Agent	*Streptococcus pneumoniae*
Mode of Spread	By large droplet spread and/or contact with respiratory secretions. Individuals with acute respiratory tract infections can transmit noninvasive infection. Invasive disease is not spread person-to-person.
Incubation Period	Unknown; probably 1 to 4 days
Period of Communicability	As long as organism is present in respiratory secretions. Communicability ends within 24 hours after initiation of effective antibiotic therapy.
Control Measures	There are no isolation requirements for persons with invasive *Streptococcus pneumoniae*. Chemoprophylaxis is not recommended for contacts of persons with invasive disease caused by *Streptococcus pneumoniae*. Standard precautions are recommended for hospitalized patients.
Contact Investigation	Contact investigation for persons with invasive *Streptococcus pneumoniae* is not necessary. Pneumococcal vaccination may be recommended for children younger than two years of age.
Duration of Illness	Disease brought on by *Streptococcus pneumonia* will last until an appropriate treatment regimen has been completed
Exclusion and Readmission Criteria	There are no exclusion requirements for persons with invasive *Streptococcus pneumoniae.*
Additional Resources	CDC Website – *Streptococcus pneumoniae* KDHE Disease Investigation Guidelines – *Streptococcus pneumoniae*

Syphilis

	**This disease is reportable in the state of Kansas and must be reported to public health authorities within 24 hours following suspicion, regardless of laboratory evidence. Call the STI/HIV section at 785-296-5596 or fax report to 785-296-5590.**
Signs and Symptoms	In the beginning stages of disease, there will be painless ulcerations at the site of infection. If the infected person is not treated then in approximately three weeks symptoms will progress into a faint rash, fever, swollen lymph glands, sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue. If untreated syphilis can cause extensive damage to internal organs and death may occur.
Infectious Agent	*Treponema pallidum*
Mode of Spread	Direct person-to-person transmission by sexual contact with an infected person's moist mucosal or cutaneous lesion. Congenital syphilis occurs by transplacental transmission of *T. pallidum*.
Incubation Period	Usually 21 days, with a range from 10 to 90 days.
Period of Communicability	Variable and indefinite; most transmission takes place when persons have primary or secondary mucosal or cutaneous lesions; this rarely occurs beyond the 1st year of infection. Adequate treatment ends communicability in 24 to 48 hours.
Control Measures	Public education includes recognition of symptoms and awareness of mode of transmission. Individuals should refrain from sexual intercourse until treatment is completed and lesions disappear.
Contact Investigation	A Behavioral Intervention Specialist from KDHE will complete all case and contact investigations.
Duration of Illness	Duration of illness depends on when treatment is initiated. Duration of primary syphilis lasts approximately 3 weeks. Secondary syphilis usually lasts 2 to 6 weeks. Latent syphilis and late syphilis continue until treated.
Exclusion and Readmission Criteria	There is no exclusion requirement for a person with syphilis.
Additional Resources	CDC Website – Syphilis CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Syphilis

Tetanus

	**All cases (including suspected cases) shall be reported to KDHE within 4 hours by phone.**
Signs and Symptoms	Painful muscular contractions, primarily of jaw, neck muscles, and muscles of the trunk. A common first sign is abdominal rigidity, though rigidity is sometimes confined to the region of injury. Generalized spasms may occur and are frequently induced by sensory stimuli.
Infectious Agent	*Clostridium tetani*
Mode of Spread	There is no person-to-person transmission. Tetanus spores usually enter the body through injuries, puncture wounds, lacerations, burns, or by injected contaminated drugs.
Incubation Period	Usually 3 to 21 days but can range from 1 day to several months. Shorter incubation periods are generally associated with severe disease and a poor prognosis.
Period of Communicability	None. Tetanus is not transmitted person-to-person.
Control Measures	Immunization is the best method for prevention of tetanus. Following a primary series in childhood with DT or Tdap/DTaP, tetanus-diphtheria (Td) booster doses are recommended at 10-year intervals. A booster dose is recommended after a tetanus-prone injury if the last immunization was not within the preceding 5 years.
Contact Investigation	There is no contact investigation requirement for individuals with tetanus.
Duration of Illness	Spasms brought on by infection with *Clostridium tetani* continue for 3 to 4 weeks; complete recovery may take months.
Exclusion and Readmission Criteria	There is no exclusion requirement for an individual with tetanus.
Additional Resources	CDC – Tetanus CDC Fact Sheet: Kids CDC Fact Sheet: Parents KDHE Disease Investigation Guideline – Tetanus

Tuberculosis

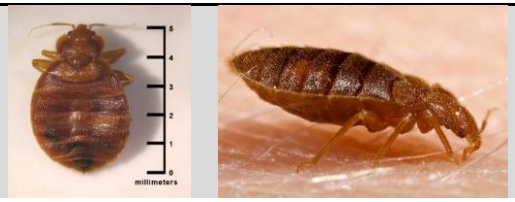
	**All cases (including suspected cases) of active disease shall be reported to KDHE within 4 hours by phone. Cases of latent disease should be reported to public health within 24 hours following receipt of laboratory evidence.**
Signs and Symptoms	Productive cough (3 weeks or longer), chest pain, fatigue, unexplained weight loss, night sweats, loss of appetite, chills, and fever.
Infectious Agent	*Mycobacterium tuberculosis*
Mode of Spread	By airborne transmission from individuals with active TB disease. Infected (i.e., skin or blood test-positive) individuals without active TB cannot transmit infection.
Incubation Period	Highly variable; from the time of exposure to a positive skin or blood test, the incubation period is usually 2 to 10 weeks. Developing active tuberculosis may take several years.
Period of Communicability	Individuals with active tuberculosis may be infectious as long as viable bacteria are present. Effective antimicrobial therapy usually eliminates communicability within 2 to 4 weeks.
Control Measures	Isolation of active cases is required until three consecutive sputum tests are negative by microscopic examination and the person has been on appropriate chemotherapy for at least two weeks and clinical improvement of symptoms is evident. Close contacts should be medically evaluated and tested. Contacts with a negative test should be retested 10-12 weeks after their last exposure to an infectious case.
Contact Investigation	Contact investigation often begins with testing of the innermost circle of contacts defined as family and household members. If there is evidence of transmission within this circle the investigator will increase the scope of the contact investigation to include testing of close friends, co-workers and other close social contacts. This process is repeated until an outer limit of transmission has been established.
Duration of Illness	Active TB can last from 4 months to 2 years.
Exclusion and Readmission Criteria	Persons who have positive skin or blood tests, but no evidence of active disease, are not infectious and should not be excluded from school. Each infected person with active TB should be in respiratory isolation, except when seeking medical care. Control measures shall be followed until three consecutive sputum tests are negative by microscopic examination, the person has been on appropriate chemotherapy for at least two weeks, and clinical improvement of symptoms is evident. Close contacts should be medically evaluated.
Additional Resources	CDC Website – Tuberculosis

Additional Resources

Directory of Local Health Department Contacts

County Name	Phone Number	County Name	Phone Number	County Name	Phone Number
Allen	(620) 365-2191	**Greeley**	(620) 376-4200	**Osborne**	(785) 346-2412
Anderson	(785) 448-6559	**Greenwood**	(620) 583-6632	**Ottawa**	(785) 392-2822
Atchison	(913) 367-5152	**Hamilton**	(620) 384-7875	**Pawnee**	(620) 285-6963
Barber	(620) 886-3294	**Harper**	(620) 842-5132	**Philips**	(785) 543-6850
Barton	(620) 793-1902	**Harvey**	(316) 283-1637	**Pottawatomie**	(785) 457-3719
Bourbon	(620) 223-4464	**Haskell**	(620) 675-8191	**Pratt**	(620) 672-4135
Brown	(785) 742-2505	**Hodgeman**	(620) 357-8736	**Rawlins**	(785) 626-3968
Butler	(316) 321-3400	**Jackson**	(785) 364-2670	**Reno**	(620) 694-2900
Chase	(620) 273-6377	**Jefferson**	(785) 403-0025	**Republic**	(785) 527-5671
Chautauqua	(620) 725-5850	**Jewell**	(785) 378-4060	**Rice**	(620) 257-2171
Cherokee	(620) 429-3087	**Johnson**	(913) 826-1303	**Riley**	(785) 776-4779
Cheyenne	(785) 332-2381	**Kearny**	(620) 355-6342	**Rooks**	(785) 425-7352
Clark	(620) 635-2624	**Kingman**	(620) 532-2221	**Rush**	(785) 222-3427
Clay	(785) 632-3193	**Kiowa**	(620) 723-2136	**Russell**	(785) 483-6433
Cloud	(785) 243-8140	**Labette**	(620) 421-4350	**Saline**	(785) 826-6602
Coffey	(620) 364-8631	**Lane**	(620) 397-2809	**Scott**	(620) 872-5774
Comanche	(620) 582-2431	**Leavenworth**	(913) 250-2013	**Sedgwick**	(316) 660-5555
Cowley	(620) 221-1430	**Lincoln**	(785) 524-4406	**Seward**	(620) 626-3369
Crawford	(620) 231-5411	**Linn**	(913) 352-6640	**Shawnee**	(785) 251-2488
Decatur	(785) 475-8118	**Logan**	(785) 671-4502	**Sheridan**	(785) 675-2101
Dickinson	(785) 263-4179	**Lyon**	(620) 342-4864	**Sherman**	(785) 890-4888
Doniphan	(785) 985-3591	**Marion**	(620) 382-2550	**Smith**	(785) 282-6656
Douglas	(785) 843-0721	**Marshal**	(785) 562-3485	**Stafford**	(620) 549-3504
Edwards	(620) 659-3102	**McPherson**	(620) 241-1753	**Stanton**	(620) 492-6443
Elk	(620) 374-2277	**Meade**	(620) 873-8745	**Stevens**	(620) 544-7177
Ellis	(785) 628-9440	**Miami**	(913) 294-2431	**Sumner**	(620) 326-2774
Ellsworth	(785) 472-4488	**Mitchell**	(785) 738-5175	**Thomas**	(785) 460-4596
Finney	(620) 272-3600	**Montgomery**	(620) 251-4210	**Trego**	(785) 743-6348
Ford	(620) 227-4545	**Morris**	(620) 767-5175	**Wabaunsee**	(785) 765-2425
Franklin	(785) 229-3530	**Morton**	(620) 697-2612	**Wallace**	(785) 852-4272
Geary	(785) 762-5788	**Nemaha**	(785) 284-2152	**Washington**	(785) 325-2600
Gove	(785) 754-2147	**Neosho**	(620) 431-5770	**Wichita**	(620) 375-2289
Graham	(785) 421-3326	**Ness**	(785) 798-3388	**Wilson**	(620) 378-4455
Grant	(620) 356-1545	**Norton**	(785) 877-5745	**Woodson**	(620) 625-2484
Gray	(620) 855-2424	**Osage**	(785) 828-3117	**Wyandotte**	(913) 573-6712

Insect Reference Guide

Causative Organism	Bed bugs (*Cimex lectularius*)	Head Lice (*Pediculus humanus capitis)*	Scabies (*Sarcoptes scabiei* var. *hominis*)
Signs and Symptoms	Slightly swollen and red area that may itch and be irritating. The bite marks may be random or appear in a straight line.	Itching and irritation may be experienced. Sores on the head caused by scratching.	Intense itching and a pimple-like itchy rash, which can include tiny blisters and scales.
Health Risks	No serious medical threat – not known to spread disease	No serious medical threat – not known to spread disease	Not known to spread disease, but perpetual itching may lead to skin sores which may become infected.
Person-to-Person Spread?	No	Yes	Yes
Mode of Spread	Spread through shared personal belongings and travel to an area infested with bedbugs.	Head-to-head contact with an infested person (more common) and sharing of clothing or belongings (less common).	Spread by direct, prolonged skin-to-skin contact. It is also spread through sharing of clothing, towels, or bedding.
Control Measures	Infestations are commonly treated by insecticide spraying. Monitor household contacts for signs of bed bug bites.	All household members and other close contacts should be checked and treated simultaneously.	Individuals with scabies should be treated concurrently with household and close contacts.
Exclusion and Readmission Criteria	There is no exclusion for an individual with bed bugs.	Individuals with head lice are no longer required to be excluded from school. It is recommended students are sent home at end of day and treated before returning.	Each person shall be excluded from attending or working in a school until 24 hours following initiation of appropriate antiparasitic therapy.
Additional Notes		Treatments should be strictly followed according to the treatment directions.	If a person thinks they may have scabies after coming in contact with an infected person, contact a physician for evaluation. Products used to treat scabies are available only with a doctor's prescription.
Additional Resources	CDC Website – Bed bugs	CDC Website – Head Lice	CDC Website – Scabies
Images			

Disease Outbreaks

An outbreak is any clustering of cases in time and space. For schools in particular, outbreaks focus on illness clustered in time among students and staff beyond normal illness rates. **All outbreaks (of any disease) are reportable to the Kansas Department of Health and Environment Infectious Disease Epidemiology and Response team.** These reports can be made through the epidemiology hotline (877-427-7317) or through email (kdhe.epihotline@ks.gov). Diseases which are reportable have specific requirements to be considered an outbreak and some are specified below.

Measles Outbreak Definition: One case of measles (confirmed by laboratory evidence) is considered an outbreak.

Mumps Outbreak Definition: Three or more cases linked by time (cases occurring within 50 days of each other) and place (e.g., school classroom). In recent years, mumps outbreaks have occurred in highly vaccinated populations in high transmission settings, including elementary, middle, and high schools, colleges, and camps. Especially in these settings, rapid detection and investigation of cases, and implementation of control measures may reduce the magnitude of outbreaks.

Pertussis Outbreak Definition: Two or more cases clustered in time (cases occurring within 42 days of each other) and space (e.g., in one building) where transmission is suspected to have occurred in that setting (e.g., school or daycare) (If all cases occur among members of the same household, it would **not** be classified as an outbreak.)

Varicella Outbreak Definition: The occurrence of ≥5 varicella cases that are related in place and epidemiologically linked. (If all cases occur among members of the same household, it would **not** be classified as an outbreak.)

Outbreak investigation is an essential component to the control of infectious diseases. Early detection of an outbreak and thorough investigation of both cases and contacts may help prevent the disease from spreading. This translates into less time children and staff spend absent from school.

When investigating an outbreak of any kind, creating a line list, a table that summarizes information about persons associated with an outbreak, will assist disease investigators in understanding the scope of the outbreak. These line lists collect information such as name, age, date/time of disease onset, symptoms experienced, vaccination status, and recovery date/time (if applicable). The following page has examples of line lists, which may be used in an outbreak investigation. Coordinate any disease investigation with the Infectious Disease Epidemiology and Response team at KDHE.

Line List Examples

Below are examples of line lists created for an outbreak. The section in blue is general demographic information we would collect for any outbreak, regardless of the illness associated with the event. This helps us keep tabs on the individuals experiencing illness and makes contact investigation easier. Below the general information are examples of line list additions which we would include on disease-specific outbreaks. The section in red represents the questions we would add for an outbreak of gastrointestinal illness while the section in green represents the questions we would add for an outbreak of varicella. KDHE epidemiology staff might add additional questions to accompany those below for specific information, depending on the situation and the infectious agent. Please consult with KDHE epidemiology staff (877-427-7317) before the creation of a line list to ensure all pertinent information is being collected.

Information to be collected on all outbreaks:

Last Name	First Name	Race	Ethnicity	DOB	Sex	Student or Staff?	Grade	Healthcare		
								Healthcare provider visited	Visited ER	Hospitalized
Bear	Yogi	White	Non-Hispanic	5/15/1958	M	Staff	2	Y	N	N
Jetson	Elroy	White	Non-Hispanic	6/7/2006	M	Student	2	N	N	N

Gastrointestinal Illness Outbreak – Additional Questions

Onset Date	Onset Time	Symptoms Experienced								Recovery		
		Vomiting	Diarrhea	Nausea	Fever	Abdominal Cramps	Headache	Chills	Other Symptoms	Recovered?	Recover Date	Recover Time
5/6/14	9:00am	Y	Y	Y	N	N	N	N	N	N	N/A	N/A
5/8/14	12:45pm	N	Y	Y	Y	Y	N	N	N	Y	5/10/14	8:00pm

Varicella Outbreak – Additional Questions

Rash Onset Date	Number of Lesions				Diagnosed By				Vaccination History		Lab work done?
	<50	50-249	250-500	>500	Parent	Physician/Nurse	School	Self	Dose 1 date	Dose 2 date	
10/22/14		X				X			3/15/2006	3/8/2010	N
10/25/14			X				X		6/22/2001	7/1/2005	N

General Educational Information and Posters

	"Cover your cough." Purpose: Avoid the spread of germs. English Version Spanish Version		"Don't give bacteria a free ride." (Wagon) Purpose: Promote Hand Washing English Version Spanish Version
	"Don't open the door to infection." Purpose: Keep cuts, scrapes, and scratches clean, dry, and covered. English Version Spanish Version		"Sharing isn't always caring." Purpose: Do not share personal items. English Version Spanish Version
	"Is it a spider bite?" Purpose: Have marks resembling insect bites inspected. English Version Spanish Version		"Don't give bacteria a free ride." Purpose: Promote Hand Washing English Version Spanish Version
	"Is it a spider bite?" Purpose: Have marks resembling insect bites inspected. English Version Spanish Version		"Sharing isn't always caring." Purpose: Do not share personal items. English Version Spanish Version

Additional References

1. American Academy of Pediatrics. Pickering L, ed. *2015 Red Book: Report of the Committee on Infectious Diseases*. 30th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2015.

2. Heymann D, editor. Control of Communicable Diseases Manual. 19th ed. Washington, D.C.: American Public Health Association; 2008.